PCT/US2003/028547

5716/6881 FIGURE 5267

WO 2004/030615

CTCTTGCGGAGACGCGCGCGTCGGGGTTTAACGCGTTTCTGGGCCGCCGTAAGCCCGGCCTAGGGGCAGCTTTGA $\verb|CTCGAGAGCCGGCTATAGGCGCAAGGTTCCCTGGAACGGGAGGCGCCAGCGGGGGGGCGCTGGCCGTGCT|\\$ AAAGCACAGCTCGACGTTGCCGCCCGAAAGCACCCAGGTCCGGGGCTACGACTTCAACCGCGGTGTGAATTACCG CGCACTGCTGGAGGCCTTCGGCACCACCGGCTTCCAAGCAACCTTCGGGCGCGCTGTACAGCAAGTCAATGC CATGATCGAGAAGAAGCTGGAACCACTGTCACAGGATGAAGACCAGCACGCGGACCTGACCCAGAGCCGCCCCC ACTTACCAGCTGCACCATTTTCCTGGGATATACATCCAACCTCATCAGTTCAGGCATCCGTGAGACCATTCGCTA CCTTGTGCAGCACAACATGGTGGACGTATTGGTGACCACAGCTGGCGGCGTGGAGGAAGACCTCATCAAGTGCCT GGCGCCCACATACTTGGGCGAGTTTAGCCTCAGGGGGAAGGAGCTCCGGGAGAACGGGATCAATAGGATCGGAAA CCTGCTGGTGCCCAATGAGAATTACTGCAAGTTTGAGGACTGGCTGATGCCCATTCTGGACCAGATGGTGATGGA GCAGAACACAGAGGGTGTAAAGTGGACGCCTTCTAAGATGATCGCCCGGCTGGGCAAGGAGATCAACAACCCAGA CATGATCTTCTTCCATTCCTACAAGAACCCGGGCCTGGTCCTGGACATCGTTGAGGACCTGAGGCTCATCAACAC CAACCTCATGCGGAACGGGGCCGACTACGCTGTTTACATCAACACAGCCCAGGAGTTTGATGGCTCTGACTCAGG TGCCCGACCAGACGAGGCTGTCTCCTGGGGCAAGATCCGGGTGGATGCACAGCCCGTCAAGGTCTATGCTGACGC

AAAGCACAGCTCGACGTTGCCGCCCGAAAGCACCCAGGTCCGGGGCTACGACTTCAACCGCGGTGTGAATTACCG ACTTACCAGCTGCACCATTTTCCTGGGATATACATCCAACCTCATCAGTTCAGGCATCCGTGAGACCATTCGCTA CCTTGTGCAGCACAACATGGTGGACGTATTGGTGACCACAGCTGGCGGCGTGGAGGAAGACCTCATCAAGTGCCT GGCGCCCACATACTTGGGCGAGTTTAGCCTCAGGGGGAAGGAGCTCCGGGAGAACGGGATCAATAGGATCGGAAA CCTGCTGGTGCCCAATGAGAATTACTGCAAGTTTGAGGACTGGCTGATGCCCATTCTGGACCAGATGGTGATGGA GCAGAACACAGAGGGTGTAAAGTGGACGCCTTCTAAGATGATCGCCCGGCTGGGCAAGGAGATCAACAACCCAGA GTCCGTGTATTACTGGGCCCAGAAGAACCACATCCCTGTGTTTAGTCCCGCACTTACAGACGGCTCGCTGGGCGA CATGATCTTCTTCCATTCCTACAAGAACCCGGGCCTGGTCCTGGACATCGTTGAGGCCCAGGAGTTTGATGGCTC ${\tt TGACTCAGGTGCCCGACCAGACGAGGCTGTCTCCTGGGGCAAGATCCGGGTGGATGCACAGCCCGTCAAGGTCTA}$ AAAAAAAAA

 $\tt CTCTTGCGGAGACGCGCGTCGGGGTTTAACGCGTTTCTGGGCCGCCGTAAGCCCGGCCTAGGGGCAGCTTTGA$ AAAGCACAGCTCGACGTTGCCGCCCGAAAGCACCCAGGTCCGGGGCTACGACTTCAACCGCGGTGTGAATTACCG CGCACTGCTGGAGGCCTTCGGCACCACCGGCTTCCAAGCAACCTTCGGGCGCGCTGTACAGCAAGTCAATGC ACTTACCAGCTGCACCATTTTCCTGGGATATACATCCAACCTCATCAGTTCAGGCATCCGTGAGACCATTCGCTA $\tt CCTTGTGCAGCACAACATGGTGGACGTATTGGTGACCACAGCTGGCGGCGTGGAGGAAGACCTCATCAAGTGCCT$ GGCGCCCACATACTTGGGCGAGTTTAGCCTCAGGGGGAAGGAGCTCCGGGAGAACGGGATCAATAGGATCGGAAA GCAGAACACAGAGGGTGTAAAGTGGACGCCTTCTAAGATGATCGCCCGGCTGGGCAAGGAGATCAACAACCCAGA GTCCGTGTATTACTGGGCCCAGAAGAACCACATCCCTGTGTTTAGTCCCGCACTTACAGACGGCTCGCTGGGCGA CATGATCTTCTTCCATTCCTACAAGAACCCGGGCCTGGTCCTGGACATCGTTGAGGGTGCCCGACCAGACGAGGC TGTCTCCTGGGGCAAGATCCGGGTGGATGCACAGCCCGTCAAGGTCTATGCTGACGCCTCCCTGGTCTTCCCCCT

MEGSLEREAPAGALAAVLKHSSTLPPESTQVRGYDFNRGVNYRALLEAFGTTGFQATNFGRAVQQVNAMIEKKLE PLSQDEDQHADLTQSRRPLTSCTIFLGYTSNLISSGIRETIRYLVQHNMVDVLVTTAGGVEEDLIKCLAPTYLGE FSLRGKELRENGINRIGNLLVPNENYCKFEDWLMPILDQMVMEQNTEGVKWTPSKMIARLGKEINNPESVYYWAQ KNHIPVFSPALTDGSLGDMIFFHSYKNPGLVLDIVEGARPDEAVSWGKIRVDAQPVKVYADASLVFPLLVAETFA OKMDAFMHEKNED

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5721/6881 FIGURE 5272

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CCAGCAGGGGGGCTGGGGGGAAACGACGCCAGGAAAGCTATCGCGCCAGAGAGGGCGACGGGGGCTCGGG $\tt CCCTCCCAGACCGCCTGGGCCGCCGGATGTGCACTAAAATGGAACAGCCCTTCTACCACGACGACTCATACAC$ AGCTACGGGATACGGCCGGGCCCCTGGTGGCCTCTCTCTACACGACTACAAACTCCTGAAACCGAGCCTGGCGGT CAACCTGGCCGACCCCTACCGGAGTCTCAAAGCGCCTGGGGCTCGCGGACCCGGCCCAGAGGGCGGCGGTGGCGG CAGCTACTTTCTGGTCAGGGCTCGGACACCGGCGCGTCTCTCAAGCTCGCCTCTTCGGAGCTGGAACGCCTGAT TGTCCCCAACAGCAACGGCGTGATCACGACGACGCCTACACCCCCGGGACAGTACTTTTACCCCCGCGGGGGTGG ${\tt CAGCGGTGGAGGTGCAGGGGGCGCGCGCGCGTCACCGAGGAGGAGGGGCTTCGCCGACGGCTTTGTCAA}$ AGCCCTGGACGATCTGCACAAGATGAACCACGTGACACCCCCCAACGTGTCCCTGGGCGCTACCGGGGGGCCCCC ${\tt GGCTGGGCCCGGGGCGTCTACGCCGGCCCGGAGCCACCTCCCGTTTACACCAACCTCAGCAGCTACTCCCCAGC}$ CTCTGCGTCCTCGGGAGGCGCCGGGGCTGCCGTCGGGACCGGGAGCTCGTACCCGACGACCATCAGCTACCT $\tt CCCACACGCGCCCCTTCGCCGGTGGCCACCCGGCGCAGCTGGGCTTGGGCCGCGGCGCCTCCACCTTCAAGGA$ GGAACCGCAGACCGTGCCGGAGGCGCGCAGCCGGGACGCCACCCGCCGGTGTCCCCCATCAACATGGAAGACCA AGAGCGCATCAAAGTGGAGCGCAAGCGGCTGCGGAACCGGCTGGCGGCCACCAAGTGCCGGAAGCGGAAGCTGGA GCGCATCGCGCCCTGGAGGACAAGGTGAAGACGCTCAAGGCCGAGAACGCGGGGCTGTCGAGTACCGCCGGCCT $\verb|CCTCCGGGAGCAGGTGGCCCAGCTCAAACAGAAGGTCATGACCCACGTCAGCAACGGCTGTCAGCTGCTTGG|\\$ $\tt GGTCAAGGGACACGCCTTC\underline{TGA}ACGTCCCCTGCCCCTTTACGGACACCCCCTCGCTTGGACGGCTGGGCACACGC$ GGGCGATCGCGGCGGAGCTGGCCCCGCCGCCGCTGGTACTCAAGCCCGCGGGACATTGGGAAGGGGACCCCCGCCC CCTGCCCTCCCCTCTCTGCACCGTACTGTGGAAAAGAAACACGCACTTAGTCTCTAAAGAGTTTATTTTAAGACG

 $\label{thm:construction} $$\operatorname{MCTKMEQPFYHDDSYTATGYGRAPGGLSLHDYKLLKPSLAVNLADPYRSLKAPGARGPGPEGGGGGSYFSQQGSD TGASLKLASSELERLIVPNSNGVITTTPTPPGQYFYPRGGGSGGGAGGAGGGVTEEQEGFADGFVKALDDLHKMN HVTPPNVSLGATGGPPAGPGGVYAGPEPPPVYTNLSSYSPASASSGGAGAAVGTGSSYPTTTISYLPHAPPFAGG HPAQLGLGRGASTFKEEPQTVPEARSRDATPPVSPINMEDQERIKVERKRLRNRLAATKCRKRKLERIARLEDKV KTLKAENAGLSSTAGLLREQVAQLKQKVMTHVSNGCQLLLGVKGHAF$

MASGNARIGKPAPDFKATAVVDGAFKEVKLSDYKGKYVVLFFYPLDFTFVCPTEIIAFSNRAEDFRKLGCEVLGV SVDSQFTHLAWINTPRKEGGLGPLNIPLLADVTRRLSEDYGVLKTDEGIAYRGLFIIDGKGVLRQITVNDLPVGR SVDEALRLVQAFQYTDEHGEVCPAGWKPGSDTIKPNVDDSKEYFSKHN

MDLSELERDNTGRCRLSSPVPAVCRKEPCVLGVDEAGRGPVLGPMVYAICYCPLPRLADLEALKVADSKTLLESE RERLFAKMEDTDFVGWALDVLSPNLISTSMLGRVKYNLNSLSHDTATGLIQYALDQGVNVTQVFVDTVGMPETYQ AQLQQSFPGIEVTVKAKADALYPVVSAASICAKVARDQAVKKWQFVEKLQDLDTDYGSGYPNDPKTKAWLKEHVE PVFGFPQFVRFSWRTAQTILEKEAEDVIWEDSASENQEGLRKITSYFLNEGSQARPRSSHRYFLERGLESATSL

GACAGCGCCGAGTTGGCGGCTGAGCTGGGCATGGAGCACCAGGCGGTGGTGGGCGCCGTGAAGAGCCTTCAGGCG CTGCCCAGTGGCAAAGTGGGCTTCAGCAAGGCCATGTCCAACAAGTGGATTCGGGTGGACAAGAGTGCGGCTGAC GGGCCCCGGGTGTTCCGAGTGGTGGACAGCATGGAGGATGAGGTGCAGCGGCGGCTCCAGCTGGTCCGGGGGGGA ATCTCCAGTGGCTCTTGGCGGGACCGGCCCTTCAAGCCCTACAACTTCTTGGCCCACGGTGTCCTCCCCGACAGC GGCCACCTTCACCCGCTGCTCAAGGTCCGCTCCCAGTTCCGACAGATCTTCCTGGAGATGGGGTTCACCGAGATG CCGACTGATAACTTCATTGAGAGCTCCTTCTGGAACTTTGACGCCCTCTTCCAGCCCCAGCAGCACCCAGCCCGT GACCAGCACGACACCTTCTTCCTTCGAGATCCAGCGGAGGCCCTGCAGCTCCCAATGGACTATGTCCAGCGGGTC AAGCGGACCCACTCTCAGGGCGGCTACGGCTCACAGGGGTACAAGTATAACTGGAAGCTGGACGAGGCCCGGAAA AACCTACTGCGAACCCACACCACATCAGCCAGCGCCCGTGCGCTCTACCGCCTTGCCCAGAAGAAGCCCTTCACT $\tt CCGGTCAAGTACTTCTCCATCGACCGCGTATTCCGGAATGAGACCCTGGACGCCACCGCACCTGGCTGAGTTCCAC$ AAGCTGGGTATCACGCAACTCCGCTTCAAGCCAGCCTACAACCCATACACAGAGCCCAGCATGGAGGTGTTCAGC TACCACCAAGGCCTGAAGAAGTGGGTGGAGGTCGGAAACTCGGGGGTCTTCCGTCCAGAGATGCTGCCCATG GGGCTTCCCGAGAACGTGTCGGTCATTGCCTGGGGCCCTCTCCCTGGAGCGCCCAACGATGATCAAATATGGCATC AACAATATCCGGGAGCTGGTGGGCCACAAGGTGAACCTGCAGATGGTGTATGACAGTCCCCTGTGCCGCCTGGAT ${\tt GCCGAGCCGAGGCCCCCCCCACACAGGAGGCTGCG}{\tt TGA}{\tt CATGGGCCACTCTAGGACAGGTCATCCTCCCCGAGT}$ CCCTGCTGCTGCCCCTTTGCATCCCTGGCCAGTGACCTTGTATTTATGAGGCTCTGTGAGGCCAGCCCCACC TTCCTCTTTCCCACCTGTCCCAGGACCAGAATCCCAGGGACAGAGGACTGGGTAGCAGGTTCCTTCTGTTGTCCT GTGTGGTGTGTCTACTGTGAGGGTGGGCCCTGAGGAGACCTGTGGGCCACCTATTGTCTAATAAAGTGGGCAGTT GCCCCCA

MADGQVAELLLRRLEASDGGLDSAELAAELGMEHQAVVGAVKSLQALGEVIEAELRSTKHWELTAEGEEIAREGS HEARVFRSIPPEGLAQSELMRLPSGKVGFSKAMSNKWIRVDKSAADGPRVFRVVDSMEDEVQRRLQLVRGGQAEK LGEKERSELRKRKLLAEVTLKTYWVSKGSAFSTSISKQETELSPEMISSGSWRDRPFKPYNFLAHGVLPDSGHLH PLLKVRSQFRQIFLEMGFTEMPTDNFIESSFWNFDALFQPQQHPARDQHDTFFLRDPAEALQLPMDYVQRVKRTH SQGGYGSQGYKYNWKLDEARKNLLRTHTTSASARALYRLAQKKPFTPVKYFSIDRVFRNETLDATHLAEFHQIEG VVADHGLTLGHLMGVLREFFTKLGITQLRFKPAYNPYTEPSMEVFSYHQGLKKWVEVGNSGVFRPEMLLPMGLPENVSVIAWGLSLERPTMIKYGINNIRELVGHKVNLQMVYDSPLCRLDAEPRPPPTQEAA

GTCCGTACTGCAGAGCCGCTGCCGGAGGGTCGTTTTAAAGGGCCCGCGCGTTGCCGCCCCCTCGGCCCGCCATGC TGCTATCCGTGCCGCTGCTCGTCGTCCTCGGCCTGGCCGTCGCCGAGCCTGCCGTCTACTTCAAGGAGCAGT TTCTGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAGTCAGATTTTGGCAAATTCGTTCTCA GTTCCGGCAAGTTCTACGGTGACGAGAGAAAGATAAAGGTTTGCAGACAAGCCAGGATGCACGCTTTTATGCTC TGTCGGCCAGTTTCGAGCCTTTCAGCAACAAAGGCCAGACGCTGGTGGTGCAGTTCACGGTGAAACATGAGCAGA AATACAACATCATGTTTGGTCCCGACATCTGTGGCCCTGGCACCAAGAAGGTTCATGTCATCTTCAACTACAAGG GCAAGAACGTGCTGATCAACAACGACATCCGTTGCAAGGATGATGAGTTTACACACCTGTACACACTGATTGTGC GGCCAGACAACACCTATGAGGTGAAGATTGACAACAGCCAGGTGGAGTCCGGCTCCTTGGAAGACGATTGGGACT TCCTGCCACCCAAGAAGATAAAGGATCCTGATGCTTCAAAACCGGAAGACTGGGATGAGCCGAGCCCAAGATCGATG ATCCCACAGACTCCAAGCCTGAGGACTGGGACAAGCCCGAGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGG ACTGGGATGAAGAGTGGACGGAGAGTGGGAACCCCCAGTGATTCAGAACCCTGAGTACAAGGGTGAGTGGAAGC CCCGGCAGATCGACAACCCAGATTACAAGGGCACTTGGATCCACCCAGAAATTGACAACCCCGAGTATTCTCCCG ATCCCAGTATCTATGCCTATGATAACTTTGGCGTGCTGGGCCTGGACCTCTGGCAGGTCAAGTCTGGCACCATCT TTGACAACTTCCTCATCACCAACGATGAGGCATACGCTGAGGAGTTTGGCAACGAGACGTGGGGCGTAACAAAGG CAGCAGAGAAACAAATGAAGGACAAACAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAGAAAACGCA AAGAGGAGGAGGAGGACAAGGAGGATGATGAGGACAAAGATGAGGAGGAGGATGAGGACGACGACAAGG GAGGCCTGAGCGCTCCTGCCGCAGAGCTTGCCGCGCCCAAATAATGTCTCTGTGAGACTCGAGAACTTTCATTTTT TTCCAGGCTGGTTCGGATTTGGGGTGGATTTTGGTTTTGTTCCCCTCCACTCCCCCCACCCCCTCCCCCCC $\tt CTTTTTTTTTTTTTTTAAACTGGTATTTTATCTTTGATTCTCCTTCAGCCCTCACCCCTGGTTCTCATCTTTC$ TTGATCAACATCTTTTCTTGCCTCTGTCCCCTTCTCTCATCTCTTAGCTCCCCTCCAACCTGGGGGGCAGTGGTG TCTATTAAATTAAATTTTGTGTCTC

MLLSVPLLLGLIGLAVAEPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTSQDARFY ALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTDMHGDSEYNIMFGPDICGPGTKKVHVIFNY KGKNVLINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKI DDPTDSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQIDNPDYKGTWIHPEIDNPEYS PDPSIYAYDNFGVLGLDLWQVKSGTIFDNFLITNDEAYAEEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKK RKEEEEAEDKEDDEDKDEDEEDKEEDEEDVPGQAKDEL

CCGGAAGTGGTCGGCGCGCGCGCGCGCGCCTGGGCGCTAAGATGGCGGCGCGTGAGTTGCATGTTGTGTGAG GATCCCGGGGCCGCCGCGTCGCTCGGGCCCCCCCCATCGCCCATCACCCTCAAAAACGCTGCAGCAGCAGAC CTTCAAGATCCGCATGGAGCCTGACGAGACGGTGAAGGTGCTAAAGGAGAAGATAGAAGCTGAGAAGGTCGTGA TGCCTTCCCCGTGGCTGGACAGAAACTCATCTATGCCGGCAAGATCTTGAGTGACGATGTCCCTATCAGGGACTA TCGCATCGATGAGAAGAACTTTGTGGTCGTCATGGTGACCAAGACCAAAGCCGGCCAGGGTACCTCAGCACCCCC AGAGGCCTCACCCACAGCTGCCCCAGAGTCCTCTACATCCTTCCCGCCTGCCCCCACCTCAGGCATGTCCCATCC GACGATGCTGACGGAGATCATGTCCATGGGCTATGAGCGAGAGCGGGTCGTGGCCGCCCTGAGAGCCAGCTACAA CAACCCCCACCGAGCCGTGGAGTATCTGCTCACGGGAATTCCTGGGAGCCCCGAGCCGGAACACGGTTCTGTCCA GGAGAGCCAGGTATCGGAGCAGCCGGCCACGGAAGCAGCAGGAGAACCCCCTGGAGTTCCTGCGGGACCAGCC GGAGAACCCTCAGCTTTTACAGCAAATCAGCCGGCACCAGGAGCAGTTCATCCAGATGCTGAACGAGCCCCCTGG $\verb|CCAGGTGACGCCGCAGGAGAAGAAGCTATAGAGAGGTTGAAGGCCCTGGGCTTCCCAGAGAGCCTGGTCATCCA|\\$ ${\tt GGCCTATTTCGCGTGTGAAAAAAATGAGAACTTGGCTGCCAACTTCCTCCTGAGTCAGAACTTTGATGACGAG{\color{red}{\textbf{TG}}}$ <u>A</u>TGCCAGGAAGCCACGGAAGCCCCCACCCTACCCTTATTCCATGAAAGTTTTATAAAAGAAAAAATATAT CTGCTCAGAGAAGCTGGCAGGACTGGGAGGCGACAGATGGGCCCCTCTTGGCCTCTGTCCCAGCTCTCTGCAGCC GAGGGGAAGCTGGAGCCCCAACTTTGATCCTCCATTGGAGTGGCCCAAATCTTTCCATCTAGGGCAAGTCCTGAA ${\tt AGGCCCAAGGCCCCCCCCAGTCTGGCCTTGGCCTCCAGCCTGGAGAAGGGCTAACATCAGCTCATTGTCAAGG}$ CCACCCCACCCCAGAACAGAACCGTGTCTCTGATAAAGGTTTTGAAGTGAATAAAGTTTTAAAAACT

MAVTITLKTLQQQTFKIRMEPDETVKVLKEKIEAEKGRDAFPVAGQKLIYAGKILSDDVPIRDYRIDEKNFVVVM VTKTKAGQGTSAPPEASPTAAPESSTSFPPAPTSGMSHPPPAAREDKSPSEESAPTTSPESVSGSVPSSGSSGRE EDAASTLVTGSEYETMLTEIMSMGYERERVVAALRASYNNPHRAVEYLLTGIPGSPEPEHGSVQESQVSEQPATE AAGENPLEFLRDQPQFQNMRQVIQQNPALLPALLQQLGQENPQLLQQISRHQEQFIQMLNEPPGELADISDVEGE VGAIGEEAPQMNYIQVTPQEKEAIERLKALGFPESLVIQAYFACEKNENLAANFLLSQNFDDE

 ${\tt CCGGTTTTTCGAGTGGCAGTCTCCAGGGCTGCCGAATACAGCAGCGATGGAGAACGGCACCGGGCCCTACGGAGA}$ AGAACGTCCACGTGAAGTCCAGGAGACGACAGTCACCGAGGGGGCTGCCAAAATCGCCTTTCCCAGTGCCAACGA GGTCTTTTATAACCCGGTGCAGGAATTCAATCGGGACCTGACATGTGCTGTGATCACCGAGTTTGCTCGCATTCA GCTTGGGGCCAAAGGAATCCAGATCAAGGTTCCAGGAGAGAAGGACACGCAAAAAGTGGTCGTGGACTTGTCAGA GCAAGAGGAGAAAAGGTTGAACTGAAAGAGAGTGAAAACCTGGCCTCAGGAGACCCAACCTCGCACAGCGGCCGT GGGGGAGATCTGTGAGGAAGGCCTGCATGTGCTGGAAGGCCTGGCAGCTTCAGGCCTACGTTCCATTCGATTTGC CCTAGAGGTGCCTGGGCTCAGATCTGTGGTTGCAAACGATGCCTCCACCCGGGCTGTGGATCTCATACGCCGGAA TGTCCAGCTCAATGACGTGGCCCACCTGGTACAGCCGAGCCAAGCAGATGCCCGGATGCTGATGTACCAGCACCA GAGGGTGTCGGAGAGGTTTGACGTCATCGATCTGGACCCCTATGGCAGCCCAGCCACCTTCCTGGATGCAGCTGT GCAGGCTGTGAGTGAAGGAGGGTTGCTGTGTGTGACCTGCACAGACATGGCGGTGTTGGCGGGGAACAGCGGGGA GACGTGCTACAGCAAGTACGGGGCCATGGCCCTCAAGAGCCGGGCCTGCCACGAGATGGCCCTGAGAATCGTCCT GCACAGCCTGGACCTCCGCGCCAACTGCTACCAGCGCTTCGTGGTGCCGCTGCTCAGCATCAGCGCTGACTTCTA CCAGTGTGTGGGCTGCGGGGCCTTCCACCTTCAGCGTCTCGGCAAAGCGTCAGGAGTCCCCAGCGGCCGAAA GTTCTCTGCAGCCTGTGGTCCCCCTGTGACCCCCGAGTGTGAACACTGTGGGCCAACGACCAGCTTGGTGGCCC CATGTGGGCAGAGCCCATCCATGACCTGGATTTTGTGGGCCGTGTCCTGGAGGCTGTGAGCGCTAACCCCGGCCG CTTCCACACCTCGGAGCGGATCCGAGGGGTCCTGAGCGTCATCACTGAGGAGCTCCCGGACGTGCCTCTGTACTA CACCCTGGACCAGCTGAGCAGCACCATCCACTGCAACACCCAAGCCTCCTGCAGTTGCGGTCGGCCCTCCTCCA CGCTGACTTCCGGGTCTCACTCTCCCACGCCTGTAAGAACGCTGTGAAGACGGATGCCCCTGCCCTCTGC GGACATCATGCGTTGCTGGGAGAAGGAATGTCCGGTGAAACGGGAGCGACTATCAGAGACTAGCCCAGCGTTCCG CATTCTCAGTGTGGAGCCCAGGCTGCAGGCCAACTTCACCATCCGGGAAGATGCCAACCCCAGCTCCCGACAGCG AGGACTCAAGCGCTTCCAGGCTAACCCGGAGGCCAACTGGGGTCCCCGGCCTCGTGCCCGGCCAGGGGGCAAGGC GGCCGACGAAGCTATGGAGGAGACGCAGGCTGCTTCAGAACAAGCGGAAGGAGCCGCCGGAAGATGTGGCCCA GCGGGCTGCCCGGCTCAAGACATTTCCTTGCAAGAGGTTTAAGGAGGGCACCTGTCAACGCGGGGACCAGTGCTG CTACTCCCACAGCCCCCGACACCCAGGGTTTCTGCTGATGCTGCCCCTGACTGTCCAGAGACCTCCAACCAGAC ${\tt CCCCCTGGACCTGGGGCTGCGCCTGGGCCAGGCATAGAC}{{\tt TGA}}{\tt ACCAATAAAGAGATGTCACGTCACCTTCAAAA}$ *А*АААААААААААААААААААААААААААААА

MQGSSLWLSLTFRSARVLSRARFFEWQSPGLPNTAAMENGTGPYGEERPREVQETTVTEGAAKIAFPSANEVFYN PVQEFNRDLTCAVITEFARIQLGAKGIQIKVPGEKDTQKVVVDLSEQEEEKVELKESENLASGDQPRTAAVGEIC EEGLHVLEGLAASGLRSIRFALEVPGLRSVVANDASTRAVDLIRRNVQLNDVAHLVQPSQADARMLMYQHQRVSE RFDVIDLDPYGSPATFLDAAVQAVSEGGLLCVTCTDMAVLAGNSGETCYSKYGAMALKSRACHEMALRIVLHSLD LRANCYQRFVVPLLSISADFYVRVFVRVFTGQAKVKASASKQALVFQCVGCGAFHLQRLGKASGVPSGRAKFSAA CGPPVTPECEHCGQRHQLGGPMWAEPIHDLDFVGRVLEAVSANPGRFHTSERIRGVLSVITEELPDVPLYYTLDQ LSSTIHCNTPSLLQLRSALLHADFRVSLSHACKNAVKTDAPASALWDIMRCWEKECPVKRERLSETSPAFRILSV EPRLQANFTIREDANPSSRQRGLKRFQANPEANWGPRPRARPGGKAADEAMEERRRLLQNKRKEPPEDVAQRAAR LKTFPCKRFKEGTCQRGDQCCYSHSPPTPRVSADAAPDCPETSNQTPPGPGAAAGPGID

MSLEDPFFVVRGEVQKAVNTARGLYQRWCELLQESAAVGREELDWTTNELRNGLRSIEWDLEDLEETIGIVEANP GKFKLPAGDLQERKVFVERMREAVQEMKDHMVSPTAVAFLERNNREILAGKPAAQKSPSDLLDASAVSATSRYIE EQQATQQLIMDEQDQQLEMVSGSIQVLKHMSGRVGEELDEQGIMLDAFAQEMDHTQSRMDGVLRKLAKVSHMTSD RRQWCAIAVLVGVLLLVLILLFSL WO 2004/030615 PCT/US2003/028547

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AGATGTATCACTCCCGCATGCAGCGCGGTGGCCTGCGGCTGCACCGGAGTCTGCAGCTGTCGCTGGTCATGCGCA CTGACCCTCGCCTGCACCCGCCCGAGAAGCCGAGTCCACGGCCGAGACAGCGACCCCCGACGGTGAGCACCCGT AAGTCAGCCGCAAACGACGCAGCAGCAGCCTGAGCGACGGGGGGACGCTGGACTGGTCCCGAGCAAGAAAGCCC GTCTGGAAGAAAAGGAAGAAGAGGGGGGGGCGTCATCCGAAGTCGCCGATCGCCTGCAGCCCCTCCGGCGCAAG CGGAGGGCGCCTTTCCCAACCTGGCCCGCGTCCTGCAGAGGCGCTTCTCCGGCCTCCTGAACTGCAGCCCCGCGG CCCCTCCGACGGCGCCCCCCGCGTGCGAGGCAAAGCCCGCTTGCCGCCCGGCGGACAGCATGCTCAACGTGCTCG ${\tt TGCGGGCCGTGGTGGCCTTC} \underline{{\tt TGA}}{\tt GGACCCCGAGCGGCGCTGCCGGAGCCCAGAGCGCGCGTCGAACCGTCGGCCCC}$ GAGGGCGCAGACCTGAGGCGAGGCCACCCCCCCCCCCTCCATCCTGGGGGAAGCGCCCGCGAAAACCGTGGAGAAAGCC GCCGCCCGGGCTGCTGAGAGGGCCCGGAGAGGGACTCTGTCCCCGGGGAGCCATCGCCTTCAGTGTGCAGGGACGG CACCGAGGAGTCTGAGCCGGGGGGGGGGGCGCCTTCCGCAGAGACCTGCGCCCACAGGTGCTGTCTTAGTGGACT TTGTTTGTTTTTAAAGATCTCCTCAGGGTCGGACTTCATTTTGTACTGTGGGCTGTGCTGGCCCTTTCAAGGTTT TTCAAGAGTTGGTTTTGCGTTTCCAACCTCGGAGAATTCCAGGCACTCCCCTTCCCCCTCCGCTGACATACTTGT ATAAGCGGTCATCGTTGCGTCATGGGGCAGGCGTGGGGAGCTTCCTGTCGCCTTGCGTGGGTGTGGGGCCTGGGA GGAGGTCCTGGGCGTGCACCCGCCCTGGGCAGTGGGGAGAGTGGCCTGAGTTACTTCACCCCCGCGTGCTG CTGGTTAATGTCCCGCGTCTCTGCACCTTCGGGTGGGAGCGGGGACTGATCTACTTTCACATTCTCAAGTTTTTC CCGAGAAGTTCCTGGTCTGAATCACGAGAATGTGGAGGGGTGGGGGGGTGTCAGTGGAAAGGCATAAGGCTGAGCT GAGACCAGTTGCTGGTGAAACTGGGCCAATCTGGGGAGGGGAACATCCTTGCCAGGGAGTTTCTGAGGGTCTGCT TTGTTTACCTTTCGTGCGGTGGATTCTTTTTAACTCCGTCTACCTGGCGTTTTGTTAGAAATGTCAGATAGGAAA ATAAAAACCATTTGAGT

MEVQKEAQRIMTLSVWKMYHSRMQRGGLRLHRSLQLSLVMRSARELYLSAKVEALEPEVSLPAALPSDPRLHPPR EAESTAETATPDGEHPFPEPMDTQEAPTAEETSACCAPRPAKVSRKRRSSSLSDGGDAGLVPSKKARLEEKEEEE GASSEVADRLQPPPAQAEGAFPNLARVLQRRFSGLLNCSPAAPPTAPPACEAKPACRPADSMLNVLVRAVVAF

MTLEAIRYSRGSLQILDQLLLPKQSRYEAVGSVHQAWEAIRAMKVRGAPAIALVGCLSLAVELQAGAGGPGLAAL VAFVRDKLSFLVTARPTAVNMARAARDLADVAAREAEREGATEEAVRERVICCTEDMLEKDLRDNRSIGDLGARH LLERVAPSGGKVTVLTHCNTGALATAGYGTALGVIRSLHSLGRLEHAFCTETRPYNQGARLTAFELVYEQIPATL ITDSMVAAAMAHRGVSAVVVGADRVVANGDTANKVGTYQLAIVAKHHGIPFYVAAPSSSCDLRLETGKEIIIEER PGQELTDVNGVRIAAPGIGVWNPAFDVTPHDLITGGIITELGVFAPEELRTALTTTISSRDGTLDGPQM

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MATNFLAHEKIWFDKFKYDDAERRFYQQMNRPVAGASRQSSGPGASSGPSGDHSELVVRIASLEVENQSLRGVVQ ELQQAISKLEAQLNVLEKSSPGHRATAPQTQHVSPMRQVESPAKKPASPAEDDEDDDIDLFGSDNEEEDKEAAQL REERLRQYAEKAKKPALVAKSSILLDVKPWDDETDMAQLEACVRSIELDGLVWGTSKLMPVGYGIRKLQIQCVVE DDKVGTYLLEEEITKFEEHVQSVDIAAFNKI

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MGNAAAAKKGSEQESVKEFLAKAKEDFLKKWESPAQNTAHLDQFERIKTLGTGSFGRVMLVKHKETGNHYAMKIL DKQKVVKLKQIEHTLNEKRILQAVNFPFLVKLEFSFKDNSNLYMVMEYVPGGEMFSHLRRIGRFSEPHARFYAAQ IVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDFGFAKRVKGRTWTLCGTPEYLAPEIILSKGYNKAVDWWAL GVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSHFSSDLKDLLRNLLQVDLTKRFGNLKNGVNDIKNHKWFAT TDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEEIRVSINEKCGKEFSEF

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SIVNDEVRYPRFLSAEAIGIMRRLLRRNPERRLGSSERDAEDVKKQPFFRTLGWEALLARRLPPPFVPTLSGRTD
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- GGCACGAGGCGGGGCGCCGCTGAGCCAAGTGGGCCACCCGGGCACGCCACGCTCCCGGGTCACGTGACACGGAG GGGGCCGAATTCTGCTGGAGGCAGCGCCATATCCTGGAGGTGAAGGTACCACCTC<u>ATG</u>GAGACCCCCGCGGCCGC CGCCCCGCTGGGAGCTTATTCCCCTCCTTCCTGCTCCTGGCCTGCGGGACGCTGGTGGCCGCCTTGCTGGGCGC CGCTCACCGCCTGGGGCTCTTCTATCAGCTGCTGCACAAGGTGGACAAGGCAAGCGTCCGGCATGGCGGAGAGAA CGTGGCCGCTGTGCTGAGGGCCCATGGTGTGCGGTTCATCTTCACGCTGGTCGGTGGGCACATTTCCCCGCTGCT GGTGGCCTGTGAGAAACTGGGCATCCGTGTGGTGGACACACGCCATGAGGTCACGGCCGTCTTTGCTGCTGATGC TATGGCCCGCCTGTCCGGGACGGTGGCCGTGGCCAGTGACAGCAGGCCCTGGCCTCACCAACACGGTGACTGC GGGTGCGCTCCAGGCTGTTGATCAGCTGTCCCTTTTCCGGCCACTCTGTAAGTTTTGTGTGTCTGTGCGGAGGGT GCGGGACATTGTGCCCACCCTGAGGGCCGCGATGGCTGCCGCCCAGTCGGGCACCCCAGGTCCGGTGTTTGTGGA CGTGGGCCGAGTGGTCTCCTGGTATTTAGAGAATTACCTGGCCAACCTCTTTGCAGGAGCCTGGGAGCCTCAGCC CGAGGGACCGCTGCCCCTGGACATCCCCCAGGCTTCCCCGCAGCAGGTTCAGCGCTGTGTGGAGATCCTGAGCCG GGCCAAGAGGCCTCTGATGGTGCTGGGGAGTCAGGCCCTGCTCACCCCAACGTCTGCCGACAAGCTTCGGGCTGC CGTGGAGACCTTGGGTGTTCCCTGCTTCCTTGGAGGGATGGCACGGGGGCTGTTAGGCCGCAACCACCCCCTCCA CCTATCCTATGGCCGTGTCCTCAGCCACAGCAGCAAGATCATCATCGTCAATCGTAATCGGGAAGAGATGTTGCT CAACTCAGACATCTTCTGGAAGCCCCAGGAGGCTGTGCAGGGAGATGTGGGTTCCTTCGTGCTGAAGTTAGTGGA GGGCCTTCAGGGCCAGACCTGGGCCCCAGACTGGGTGGAGGAGCTGCGGGAAGCCGACCGGCAGAAGGAGCAGAC CTTTCGGGAGAAGGCAGCGATGCCTGTGGCCCAGCACCTGAACCCAGTGCAGGTGCTGCAGCTGGTGGAGGAAAC GCTACCTGACAACTCAATTCTGGTGGTGGATGGCGGGGACTTCGTGGGCACTGCTGCCCATCTGGTACAGCCCCG CGGCCCCTGCGCTGGCTCGATCCTGGGGCCTTTGGGACTCTGGGAGTTGGTGCAGGATTTGCACTTGGGGCCAA GCTGTGCCGGCCAGATGCTGAGGTCTGGTGCCTGTTTGGGGACGGAGCTTTTGGCTACAGCCTCATCGAATTTGA GCAGGTGCCCTCTCTGGGCAGCAACGTGGCCTGTGGCCTACACTGATTATCACAAGGCAGCCATGGGTCT GGGGGCCCGGGGCTTGCTCCTCACGGGAGAACGAGGATCAGGTGGTCAAGGTGCTGCACGATGCCCAGCAGCA ${\tt A} \underline{{\tt TAG}} {\tt GGCCTTGTGGGTCAGGACGCTTGGCTGCCTTCCTCCCCCTGGACTGTGTCCAGCTGGTTTGGAGTCTCATC}$ ATTGCTTGCCCTGGGCCTATCCCATGAGGCCCAGTGACTCCACAACCTCCCTGAGGAGGGGATGGAGGGGTCAAA TCTCAGAGAGGCTCTCTTGTGAGCTCTTGGACCCTCCTCTTCACGGACCCAACTGTGCCGTTTGTCCCCTCTCTT

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LHDAQQQCRDGHPVVVNILIGRTDFRDGSIAV

5759/6881 FIGURE **5310A**

CATGGGGCCGGGGGCCCGCCGCCGCCGCCGTCGCCGATGTCGCCGCCACCGCCACCGCCACCGTGCG GGCGCTGCCCCTGCTGCTGCTAGCGGGGCCGGGGGCTGCAGCCCCCCTTGCCTGGACGGAAGCCCGTGTGC GTGTCAGCTGGAGGACCCCTGTCACTCAGGCCCCTGTGCTGGCCGTGGTGTCTGCCAGAGTTCAGTGGTGGCTGG CACCGCCGATTCTCATGCCGGTGCCCCCGTGGCTTCCGAGGCCCTGACTGCTCCCTGCCAGATCCCTGCCTCAG CAGCCCTTGTGCCCACGGTGCCCGCTGCTCAGTGGGGCCCGATGGACGCTTCCTCTGCTCCTGCCCACCTGGCTA CAACACCTGGCTCCTTCCGCTGCCAGTGTCCAGCTGGCTACACAGGGCCACTATGTGAGAACCCCGCGGTGCC TCCTGGGTTTGAGGGTCAGAATTGTGAAGTGAACGTGGACGACTGTCCAGGACACCGATGTCTCAATGGGGGGAC ATGCGTGGATGGCGTCAACACCTATAACTGCCAGTGCCCTCCTGAGTGGACAGGCCAGTTCTGCACGGAGGACGT GGATGAGTGTCAGCTGCAGCCCAACGCCTGCCACAATGGGGGTACCTGCTTCAACACGCTGGGTGGCCACAGCTG CGTGTGTGTCAATGGCTGGACAGGCGAGAGCTGCAGTCAGAATATCGATGACTGTGCCACAGCCGTGTGCTTCCA CCTGGATGACGCCTGTGTCAGCAACCCCTGCCACGAGGATGCTATCTGTGACACAAATCCGGTGAACGGCCGGGC CATTTGCACCTGTCCTCCCGGCTTCACGGGTGGGGCATGTGACCAGGATGTGGACGAGTGCTCTATCGGCGCCAA ACCTCGCTGTGAGACCGATGTCAACGAGTGTCTGTCGGGGCCCTGCCGAAACCAGGCCACGTGCCTCGACCGCAT AGGCCAGTTCACCTGTATCTGTATGGCAGGCTTCACAGGAACCTATTGCGAGGTGGACATTGACGAGTGTCAGAG TAGCCCCTGTGTCAACGGTGGGGTCTGCAAGGACCGAGTCAATGGCTTCAGCTGCACCTGCCCCTCGGGCTTCAG CGGCTCCACGTGTCAGCTGGACGTGGACGAATGCGCCAGCACGCCCTGCAGGAATGGCGCCAAATGCGTGGACCA GCCCGATGGCTACGAGTGCCGCTGTGCCGAGGGCTTTGAGGGCACGCTGTGTGATCGCAACGTGGACGACTGCTC GGTGGACAAGTACCTCTGCCGCTGCCCTTCTGGGACCACAGGTGTGAACTGCGAAGTGAACATTGACGACTGTGC ${\tt CAGCAACCCCTGCACCTTTGGAGTCTGCCGTGATGGCATCAACCGCTACGACTGTGTCTGCCAACCTGGCTTCACCTGCCAACCTGGCTTCACCTGCCAACCTGGCTTCACCTGCCAACCTGGCTTCACCTGCCAACCTGGCTTCACCTGCTTCACCTTCACCTGCTTCACCTCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCACCTTCAC$ TGGCCCCGCTGCAGCCAGAGCCTGGCCCGAGACGCCTGTGAGTCCCAGCCGTGCAGGCCGGTGGGACATGCAG CAGCGATGGAATGGGTTTCCACTGCACCTGCCCGCCTGGTGTCCAGGGACGTCAGTGTGAACTCCTCTCCCCCTG CACCCGAACCCCTGTGAGCATGGGGGCCGCTGCGAGTCTGCCCCTGGCCAGCTGCCTGTCTGCTCCTGCCCCCA GGGCTGGCAAGGCCCACGATGCCAGCAGGATGTGGACGAGTGTGCTGGCCCCGCACCCTGTGGCCCTCATGGTAT $\tt CTGCACCAACCTGGCAGGGAGTTTCAGCTGCACCTGCCATGGAGGGTACACTGGCCCTTCCTGCGATCAGGACAT$ CAATGACTGTGACCCCAACCCATGCCTGAACGGTGGCTCGTGCCAAGACGGCGTGGGCTCCTTTTCCTGCTCCTG $\tt CTGTACCGACCACGTGGCCTCCTTCACCTGCACCTGCCCCGCCAGGCTACGGAGGCTTCCACTGCGAACAGGACCT$ GCCCGACTGCAGCCCCAGCTCCTGCTTCAATGGCGGGACCTGTGTGGACGGCGTGAACTCGTTCAGCTGCCTGTG CCGTCCCGGCTACACAGGAGCCCACTGCCAACATGAGGCAGACCCCTGCCTCTCGCGGCCCTGCCTACACGGGGG $\tt CGTCTGCAGCGCCCCCCCCTGGCTTCCGCTGCACCTGGCTCACGGGCCCGCAGTGCCAGACGCT$ GGTGGATTGGTGCAGCCGCCAGCCTTGTCAAAACGGGGGTCGCTGCGTCCAGACTGGGGCCTATTGCCTTTGTCC CCCTGGATGGAGCGGACGCCTCTGTGACATCCGAAGCTTGCCCTGCAGGGAGGCCGCAGCCCAGATCGGGGTGCG GCTGGAGCAGCTGTGTCAGGCGGGTGGGCAGTGTGTGGATGAAGACAGCTCCCACTACTGCGTGTGCCCAGAGGG TGGCTATATGGGGGGCTACATGTGTGAGTGTCTTCCTGGCTACAATGGTGATAACTGTGAGGACGACGTGGACGA GTGTGCCTCCCAGCCCTGCCAGCACGGGGGTTCATGCATTGACCTCGTGGCCCGCTATCTCTGCTCCTGTCCCCC AGGAACGCTGGGGGTGCTCTGCGAGATTAATGAGGATGACTGCGGCCCAGGCCCACCGCTGGACTCAGGGCCCCG

5760/6881 FIGURE 5310B

GTGCCTACACAATGGCACCTGCGTGGACCTGGTGGGTGGTTTCCGCTGCACCTGTCCCCCAGGATACACTGGTTT CCCAGGCGGAGGTTTCCGTTGCCTTTGTCATGCTGGCTTCTCAGGTCCTCGCTGTCAGACTGTCCTGTCTCCCTG CGAGTCCCAGCCATGCCAGCATGGAGGCCAGTGCCGTCCTAGCCCGGGTCCTGGGGGTGGGCTGACCTTCACCTG TCACTGTGCCCAGCCGTTCTGGGGTCCGCGTTGCGAGCGGGTGGCGCGCTCCTGCCGGGAGCTGCAGTGCCCGGT CAGCTTCCCGGGGTCGCCGCGGGGGCCAGCAACGCCAGCTGCGGGGCCCCCCTGTCTCCACGGGGGCTCCTG CGCCGCGCACCCGAGGTCTCGGAGGAGCCGCGGTGCCCGCGCGCCCTGCCAGGCCAAGCGCGGGGACCAGCG CTGCGACCGCGAGTGCAACAGCCCAGGCTGCGGCTGGGACGGCGACTGCTCGCTGAGCGTGGGCGACCCCTG GCGGCAATGCGAGGCGCTGCAGTGCTGGCGCCTCTTCAACAACAGCCGCTGCGACCCCGCCTGCAGCTCGCCCGC CTGCCTCTACGACAACTTCGACTGCCACGCCGGTGGCCGCGAGCGCACTTGCAACCCGGTGTACGAGAAGTACTG CGCCGACCACTTTGCCGACGGCCGCTGCGACCAGGGCTGCAACACGGAGGAGTGCGGCTGGGATGGGCTGGATTG TGCCAGCGAGGTGCCGGCCCTGCTGGCCCGCGGCGTGCTGGTGCTCACAGTGCTGCCGCCAGAGGAGCTACT GCGTTCCAGCGCCGACTTTCTGCAGCGGCTCAGCGCCATCCTGCGCACCTCGCTGCGCTTCCGCCTGGACGCGCA CGGCCAGGCCATGGTCTTCCCTTACCACCGGCCTAGTCCTGGCTCCGAACCCCGGGCCCGTCGGGAGCTGGCCCC CTTCCCCGATGCCCAGAGCGCCGCTGACTACCTGGGAGCGTTGTCAGCGGTGGAGCGCCTGGACTTCCCGTACCC ACTGCGGGACGTGCGGGGGGAGCCGCTGGAGCCTCCAGAACCCAGCGTCCCGCTGCTGCCACTGCTAGTGGCGGG CGCTGTCTTGCTGCTGGTCATTCTCGTCCTGGGTGTCATGGTGGCCCGGCGCAAGCGCGAGCACACCCTCTG GTTCCCTGAGGGCTTCTCACTGCACAAGGACGTGGCCTCTGGTCACAAGGGCCGGCGGGAACCCGTGGGCCAGGA GTGCCCAGAGGCCAAGCGGCTAAAGGTAGAGGAGCCAGGCATGGGGGCTGAGGAGGCTGTGGATTGCCGTCAGTG GACTCAACACCATCTGGTTGCTGACATCCGCGTGGCACCAGCCATGGCACTGACACCACCACAGGGCGACGC GGGGGCTCTGGAGCCAATGCCAACTGAAGAGGATGAGGCAGATGACACATCAGCTAGCATCATCTCCGACCTGAT CTGCCAGGGGGCTCAGCTTGGGGCACGGACTGACCGTACTGGCGAGACTGCTTTGCACCTGGCTGCCCGTTATGC CCGTGCTGATGCAGCCAAGCGGCTGCTGGATGCTGGGGCAGACACCAATGCCCAGGACCACTCAGGCCGCACTCC CCTGCACACAGCTGTCACAGCCGATGCCCAGGGTGTCTTCCAGATTCTCATCCGAAACCGCTCTACAGACTTGGA TGCCCGCATGGCAGATGGCTCAACGGCACTGATCCTGGCGGCCCGCCTGGCAGTAGAGGGCATGGTGGAAGAGCT CATCGCCAGCCATGCTGATGTCAATGCTGTGGATGAGCTTGGGAAATCAGCCTTACACTGGGCTGCGGCTGTGAA CAACGTGGAAGCCACTTTGGCCCTGCTCAAAAATGGAGCCAATAAGGACATGCAGGATAGCAAGGAGAGACCCC $\tt CCTATTCCTGGCCGCCGCGAGGGCAGCTATGAGGCTGCCAAGCTGCTGTTGGACCACTTTGCCAACCGTGAGAT$ CACCGACCACCTGGACAGGCTGCCGCGGGACGTAGCCCAGGAGAGACTGCACCAGGACATCGTGCGCTTGCTGGA TCAACCCAGTGGGCCCCGCAGCCCCCCGGTCCCCACGGCCTGGGGCCTCTGCTCTGTCCTCCAGGGGCCTTCCT CCCTGGCCTCAAAGCGGCACAGTCGGGGTCCAAGAAGAGCAGGAGGCCCCCCGGGAAGGCGGGGCTGGGGCCGCA GGGGCCCCGGGGGCGGGCAAGAAGCTGACGCTGGCCTGCCCGGGCCCCCTGGCTGACAGCTCGGTCACGCTGTC CCAGCCCCTGGAGGATGTGTACTCAGCCTGGGCCTGCTGAACCCTGTGGCTGTGCCCCTCGATTGGGCCCGGCT GCCCCACCTGCCCTCCAGGCCCCTCGTTCCTGCTGCCACTGGCGCCGGGACCCCAGCTGCTCAACCCAGGGAC CCCCGTCTCCCCGCAGGAGCGGCCCCCGCCTTACCTGGCAGTCCCAGGACATGGCGAGGAGTACCCGGCGGCTGG GGCACACAGCAGCCCCCAAAGGCCCGCTTCCTGCGGGTTCCCAGTGAGCACCCTTACCTGACCCCATCCCCGA ATCCCCTGAGCACTGGGCCAGCCCTCACCTCCCTCCCTCAGACTGGTCCGAATCCACGCCTAGCCCAGCCAC TGCCACTGGGGCCATGGCCACCACCACTGGGGCACTGCCCAGCCACTTCCCTTGTCTGTTCCCAGCTCCCT TGCTCAGGCCCAGACCCAGCTGGGGCCCCAGCCGGAAGTTACCCCCAAGAGGCAAGTGTTGGCCTGAGACGCTCG AGTCTTTTCATCCTCTCTCTCTCCACCAACCCTCCTGCATCCTTGCCTTGCAGCGTGACCGAGATAGGTCATC

5761/6881 FIGURE 5310C

GAGCCCAGCCGAGCGTCCGCCGCTGCCCCTTGCGCTCCGCGCCCATCGCCCCAACTCCCTGGAGG CGGTGAAACGCAAGATCCAGGCCTGCAGCAGCAGGCGGACGAGGCGGAAGACCGCGCGCAGGGCCTGCAGCGGG AGCTGGACGGCGAGCGCGAGCGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCG TTGAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGAAAAAAGCTG CAGATGAGAGTGAGAGAGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTCAGG AGATGCAGCTCAAAGAGGCCAAGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGG TCATCCTGGAGGGTGAGCTGGAGGGGCAGAGGAGGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAG AAGAACTCAAGAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACA AATATGAAGAAGAAATTAAACTTCTGTCTGACAAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAA CGGTTGCAAAACTGGAAAAGACAATTGATGACCTGGAAGAAGAACTTGCCCAGGCCAAAGAAGAAGAACGTGGGCT TACATCAGACACTGGATCAGACACTAAACGAACTTAACTGTATA<u>TAA</u>GCAAAACAGAAGAGTCTTGTTCCAACAG AAACTCTGGAGCTCCGTGGGTCTTTCTCTCTCTTGTAAGAAGTTCCTTTTGTTATTGCCATCTTCGCTTTGCTG GAAATGTCAAGCAAATTATGAATACATGACCAAATATTTTGTATCGGAGAAGCTTTGAGCACCAGTTAAATCTCA TTCCTTCCCTTTTTTTTCAAATGGCACCAGCTTTTTCAGCTCTCTTATTTTTCCTTAAGTAGCATTTATTCCT AAGGTAGGCAGGGTATTTCCTAGTAAGCATACTTTCTTAAGACGGAGGCCATTTGGTTCCTGGGAGAATAGGCAG ${\tt CCCCACACTTTGAAGAATACAGACCCCAGTATCTAGTCGTGGATATAATTAAAACGCTGAAGACCATAACCTTTT}$ GCCCTTCTCCACCTCCCACCATGCAGGACAAACATCTTCTCAAGCAGTCAACGTAGAATGCTTGGGAAATAGTCA TCACTTGAGGTCAGGAGTTCGAGACCAGCCCAGCCAACATGGCGAAACCATGTCTCTACTAAAAAATACAAAAATT ATGGTGACGCCTGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGGATCGCTTGAACCCAGGAAGTGGAG AAAATAAAGTTGTTCTCTGAAGAGCAAATGTCTCATTCCAGTAATGACCCACTCAGCAGGAATATGGTGGAGTTC AGTCCAATTCAGGTCAGCCATATCCAAAAGACCACAAGTCATTACTAAGTTGAGCAAAAGAGTTTTTATCTATTA GCAGAAAGGGCCTCTCTGGCAGCAGAGATTAAAAACTGGCCCAACTTCATTTCCATACTTCAGGGAACAGCAAAT TGAGGATTTACTTATCTAGGACTT

MAGLNSLEAVKRKIQALQQQADEAEDRAQGLQRELDGERERREKAEGDVAALNRRIQLVEEELDRAQERLATALQ KLEEAEKAADESERGMKVIENRAMKDEEKMEIQEMQLKEAKHIAEEADRKYEEVARKLVILEGELERAEERAEVS ELKCGDLEEELKNVTNNLKSLEAASEKYSEKEDKYEEEIKLLSDKLKEAETRAEFAERTVAKLEKTIDDLEEKLA QAKEENVGLHQTLDQTLNELNCI

GCTCGGTGCTGATGGACGGTGCTGGTGGCCAGTGGAGAGGCGCTGGCCGCACTTCCCGTCGGGGAGAGAGTGTAA GTTCCGCTTCTCCGAGGACGCCTTCAACTCCACTTTTATCTCCACCATAGGAATTGACTTTAAAATTAGGACCAT AGAGCTCGATGGCAAGAGAATTAAACTGCAGATATGGGACACAGCCGGTCAGGAACGGTTTCGGACGATCACAAC GGCCTACTACAGGGGTGCAATGGGCATCATGCTGGTCTACGACATCACCAACGAGAAGTCCTTCGACAACATCCG GAACTGGATTCGCAACATTGAGGAGCACGCCTCTGCAGACGTCGAAAAGATGATACTCGGGAACAAGTGTGATGT GAATGACAAGAGACAAGTTTCCAAGGAACGGGGAGAAAAGCTGGCCCTCGACTATGGAATCAAGTTCATGGAGAC CAGCGCGAAGGCCAACATCAATGTGGAAAATGCATTTTTCACTCTCGCCAGAGATATCAAAGCAAAAATGGACAA AAAATTGGAAGGCAACAGCCCCCAGGGGAGCAACCAGGGAGTCAAAATCACACCGGACCAGCAGAAGAGGAGCAG CTTTTTCCGATGTGTTCTTCTGTGAGGAACACCGCCTTACTCTGAGCCTCAGCCCAGCTGACTGTGCCTGT GGCCACCAGAATGCAATTGAGAAATCGTTTATTTTAGTAACTGTCTGATCTTTTTCAACTTTTGGAGATGGAATAA GGGAGTCAAGGTGTGACCGTCGACCACAGCCAGTGTCAGGCCTCTGCCTCTGGGCCTTTGCTTTGTGGCCTCACT GCAACACAAAGCTCCACCAGGAGGCTGGTTCACGTCCCCTACCACGGAAGCGAGGTCCCAGAAGGCCAGCGGTGG TTCCAGGAGCAACAGCTCCCAAACCCTGAGCAAGGCAACCGATCGCCAGGAACCAGGAAGCATCACCCAGGAGATT TGGCGCCCACTTCCACCTCTTCTCTCAGTTTTGGACAAGTGACAAACCATTTTGCCCCCTCACTCTTTTTTTA ACTGTTAAACCAAAGGAAAGCACAAATGAAGGAAATCCTGTGTAAAGCATTGAGAAGGAAAGAAGCCTGGAGCAG $\verb|CCTCTCCTGTCCACAGCCAGGGGTTAGGTCTGCAGGCCCGTCTGCGGTCCCCATCGAGCATCAAGGGGACGCTGT| \\$ GTGTGCTGCAAGTGACCCCGAAAACAACCACAGCCGTCACATGGTCCTCCTGAAGTTGGGGCACCCTCCTCTCAG TTTTTCCACATCTGTAGTGCCATGAAGCGATTCTGTCTTTGACTTCCAATGGCAAACCTGGGTGATCGGGAACAA GCACGTTGTACCCTTGGCTGGACATGGCCAAGACACAAGGCATTCCACGGCGGCAAGCTGACCGCACAGCAGTCT GGCTTGATTTTCAGCCGTCATCATTGGGTTCTGTTTTGACAGCTCTGCTGTCCCATAGGGACTGCGACTGGGACC CTGTCAATCCAAACCATTGGCATCATCGTTTCTTTTCAATTAAAACCAACATATCAGCAATAGTCTGCTCTCCCC GTCCAAAAAAAAAAAAAAAAAA

MAKTYDYLFKLLLIGDSGVGKTCVLFRFSEDAFNSTFISTIGIDFKIRTIELDGKRIKLQIWDTAGQERFRTITT AYYRGAMGIMLVYDITNEKSFDNIRNWIRNIEEHASADVEKMILGNKCDVNDKRQVSKERGEKLALDYGIKFMET SAKANINVENAFFTLARDIKAKMDKKLEGNSPQGSNQGVKITPDQQKRSSFFRCVLL WO 2004/030615 PCT/US2003/028547

5767/6881 FIGURE 5316

GGTGAGCTGTCGCGGGCGCCCCGGCCTTGCTCAACGCCCAGCAGTCCCCACCGTCGCTGCCGCCACCGCC CTCGGCCGCTGCCGAGGCCTCCTGCAGCCATCATGTCCGCCAGCGCCGTCTACGTGCTGGACCTGAAGGGCAAGG TGCTCATCTGCCGGAACTACCGTGGCGACGTGGACATGTCAGAGGTGGAGCACTTCATGCCCATCCTGATGGAGA AGGAGGAGGAGGGGATGCTGTCGCCCATCCTGGCCCACGGGGGGGTCCGTTTCATGTGGATCAAACACAACAACC TGTTTTCCGAGTACTTCAAGGAGCTGGAGGAGGAGCATCCGGGACAACTTTGTTATCATCTACGAGCTGCTGG ACGAGCTCATGGACTTCGGCTACCCCCAGACCACCGACAGCAGCAGGAGTCCTGCAGGAGTACATCACTCAGGAAGGCC ACAAGCTGGAAACAGGGGCCCCGCGGCCACCAGCCACCGTCACCAACGCGGTGTCCTGGCGGTCCGAAGGCATCA AGTATCGGAAGAATGAGGTGTTCTTGGACGTCATCGAGTCTGTCAACCTCTTGGTCAGCGCCAACGGCAATGTCC ${\tt TGCGCAGCGAGATCGTGGGCTCCATCAAGATGCGAGTCTTCCTCTCGGGCATGCCCGAGCTGCGCCTGGGCCTCA}$ ACGACAAGGTCCTCTTTGACAACACGGGCCGCGGCAAAAGCAAATCCGTGGAGCTGGAGGATGTGAAGTTCCACC AGTGTGTGCGGCTATCACGCTTCGAGAATGACCGCACCATCTCCTTCATCCCACCCGACGGCGAGTTCGAGCTCA TGTCCTACCGTCTCAACACCCACGTCAAGCCTTTGATATGGATCGAGTCGGTGATCGAGAGCACTCCCACAGCC GCATCGAGTACATGATCAAGGCCAAAAGCCAGTTCAAGCGGCGGTCAACAGCCAACAACGTGGAGATCCACATTC CCGTGCCCAATGATGCCGACTCACCCAAGTTCAAGACGACGGTGGGGAGCGTTAAGTGGGTCCCCGAGAACAGCG TGGAGGCCGAAGACAAGGAGGCCAAGCCCCCGATCAGTGTCAAGTTCGAGATCCCTTACTTCACTACCTCCGGCA TCCAGGTGCGCTACCTGAAGATCATTGAGAAGAGTGGGTACCAGGCCCTGCCCTGGGTGCGTTATATCACGCAGA ATGGAGATTACCAGCTCCGGACCCAGTGAGGGGCTGTCGCAGCCAACACCCCGGCCTCGGGCTCCTGGTGGCAGC ACCAGGGACACCTGCCAAACCCACCAGATGGAGGGCCCTCCTGGTCTCTGGCCACCCTTCCAGCCTCTGCCC AGGGACTCCTGCCTTCACCAGGGCATCTGCTCTGCCGTCGACACTCGTCTCAGAAGCCCCTTTCCCAGAAGAGGC TGGTCTTCAAGAAGTCTCGTTTCTTTGCCCCTGAAGTCAGTTTCAGGGGAAGGATGTGAAATTTTTCCGTGTAGA GGTGGCATCTGCCACGAAGGAAGCGCCACGCTCGCCAGGCCAGCAGGGGGCGTCGTTTTGTTGCCATTTTGTTGAA CGTTATGGGTTTATGGGTGTTCCTGGAACTTGTCTTTGTGCATTCGTTGCTGTTTGTGTTACCCTCACTGTCCCC CGGCAGCGCCGCAGCGGGCCATTTACACGTCGAGGCTGGCACCTGGCGCGCTCGGGGGCCCACTGTAGCGTCTGCC TGCTCCCTGGACTCGCAGGCCTCGCCTGTGGCGCCCTTCCCAGGGCCAGCCTGGGTCACGAGATGCTGTCACTCAG CCAGATCAGTATTGACCCACCAGGGGAGGTGGGGTTTGGTGAGAGACGCCAGCCTCAGACTTTTTCCCACTGAGG GTCCAGAGAGCGGGGCCACGTGTCACCCACGTCTGCGCTTGGTCACCCGTCCTCCCCACCCTGTGTGTTTTATG TCATAGTTACATTAAATTCCATTCATTG

AGCCGTCCCATGCGTGATGTTTTTGGTGACTTCAGTGATGTTTCCTTGGAAGATTCAACAATGGAAGAATCAGA AACTTCCAGATCAGTAGAAATCTTACCAAAATAGCACCTGGTCATAGCAGATTTCTAAAAAAGAAACCAAACTCTA GATGAGAAACACTTACTCCTGAAAGAGAACCCTGTGCTCGGGAGTGGACCCAGGCTTGCCTCATGTAGACCGCCC ACCACTGCCTCCAGGATCCGAGCCAATGCCGCACTCATGAAGCTGGCCCAGCTGGAAACCCGGATCATGAATCGG AAGCTGCAGAGGAATTTGTCTGACACGGAATCTGACTCAATGACCGCCGATGCTGGTCTTCCAAAGAGAGCTGAC AGAATCCTCTCTGGGGGTGCACTCGAACTCGCGTCCCAGAACACAGACAAAACTTCCCAGAATCAAGCCCGTGAA CTTCCTGTCACCGAAAATAATGCACAGAACGCGAAGGTCAGTAGGTTTCTAAAGAAGAACAAGCACCTGTTGAA TTTGATTCTCCAGACAGTGACGAAGAAGAAATGAAAGTATTGCTAGGAAGCTTGATGGACTCTTCTAGAGAAAAA CTGAGAGCATTTACTGTACCCAGCGTGGAACTCTCCAGCGCAAAGCCTTCTCAGACATCACACCTGCCAACCTCC GCCTCCCACACGCCGTCAGTTTCCATCACAGGCGCCTTTTCAAACTCAGTGTCTTTAAAGATGGGGCATGTCAAG CTTGTGTCCTCCCCGGGAAGGAGTGAGGCTGAGACTGTGGACGAGCCAGTCTCAGAAGGTGCTGATGACAGCCTC GACGAGTTTAGAATAAATATTTTATCGCTTGACGGTCTGGCTCCAGCTGTCAGTGAGAACTCCGATTTGGAACAG GAAGAGGAAAGTGCTCAGAGACAAAAAACAGCTGGCAAAATCTTCAGAGCCGAGGCGTCCACTGGGCAGGATGCC TCGGAGCATCTCAGTGCCAGCTCGGCTTCTGCCATCCAGCAGGACAGCACTTCCAGCATGCAGCCACCATCTGAA GCCCCCATGGTGAACACAGTCAGCTCAGCTTATTCGGAGGATTTTGAAAACTCTCCAAGTCTGACAGCATCTGAG CCAACCGCCCATTCCAAGGAGTCTCTTGACAGAACACTGGACGCTTTGTCTGAATCCTCTTCAAGTGTGAAGACA GTGCAGACGCCAGATCCTGCCTTCACCTACGAGTGGACCAAGGTGGCCAGCATGGCAGCCATGGGGCCTGCCCTG GGAGGCGCCTACGTGGACCCGACACCCATCGCCAATCATGTTATCAGTGCAGATGCAATAGAAGCCCTGACCGCT TACAGCCCGGCCGTGCTGGCACTCCATGATGTGCTGAAGCAGCAGCTGAGCCTGACGCAGCAGTTCATCCAGGCC AGCCGGCACCTGCACGCCTCCCTCCTGCGCTCCCTGGACGCGGACTCCTTCCACTACCACACCCTGGAGGAAGCC AAAGAGTACATTAGGTGCCACAGACCTGCCCCACTGACCATGGAGGATGCCCTGGAGGAGGTGAACAAGGAGCTG TGAGCGCCAGCAGGTGGAGCTTGACGTGACGTCTTAACAAAAGCAAAGCACCGCAGCTTCCCAGAGTTACCAGCG CAGCACTTAAGACAGGATCTTACGGCGGGGTGGGGCTCCTGGACCGTGACCGGCGTCGTCTTCCTGGGGAGTACG ACTTGGACCGGGACCGCGACTGGGACCGGGAGCGCTTCTGGAGGAGCGCGACCTGCTCCGACTTCTGCAGGGAA GGGTGCCCAAGGGTCAGCAGCAGCCAGGCGTCGTGGGGAGGCCACAGGAAGGGGCCTCAGGCACTGCCCTGAGGC AGCCTCTGCCTACCTAGATCTGGAGCGGGAGTAGGAACGGGAGCAGGAGCGCGACCTTGACCTTGAGTACGAGCC TGAAGACTTGGAGGATCTTGAGTTGGAGCGGGAGGAAGAACGCCCTCGACTCTTGGATCTGCTCCGAGACCTCGA GGGTCCGCTGTGGGGAGAGGCCTGATGATCAGGTGCCCCAGTGGATGGGCTGCACCCAGCCCACCCTGGCCCTCA GGTTCCTAGACCACCCCAGATGCAGGGGCTCTGGCTGTGGATGTGGCGCCATAGCCACAGCAACGGTACCAAGTT CCTAAATAGTGTGGCCGAGCCTGCTGTGTGAATTCAGGCCTTGTGGAAAACACCGCCCCATAGGCACAGGCT CCACTGCAGACATCTGCGCTTTTACCTGTTCCTCTTCTCCTGGCCTTTCCTCCGCCGGGCCCGCATTTTTGCTCG GAAGAACTCATAGAGGCCGTTCTGCTCCCAGCCTTCACTGTAAGACACGGCATTCCGTGTGACCACGTGACAC CCACCCACAAGGAAGTCGTGAAAAAGTCATCAGGAGTTAATCCACAGAACCTTGGAGAGTACATGGCCCTGTGGC TGTGGGCTCCGAGCATGGGCGCAGTAGAGCTTGGTTCAGTGTTCCCACAGGGCTGTCCTCCTGCAGCCCAGTGGC TCCTCTGGTGCCCACGCCCTTGCCACCCTGCTGTTCCGCTGAGGTGGTGGGGACCCATGGTCTGTGGAACTGGGA GGCTGAGGGCCCTGTGGCAGCCGGCTGCTTGAGACGTGCCGCCGTGCCACACCTTCCCTAACTTCTTCTGATGTG

MASARKASRPMRDVFGDFSDVSLEDSTMEEIRNFQISRNLTKIAPGHSRFLKRNQTLDEKHLLLKENPVLGSGPR
LASCRPPTTASRIRANAALMKLAQLETRIMNRKLQRNLSDTESDSMTADAGLPKRADRILSGGALELASQNTDKT
SQNQARELPVTENNAQNAKVSRFLKKKQAPVENISPEAPAGKERTLQTPKQKEPARTFDSPDSDEEEMKVLLGSL
MDSSREKNTNQGFSSANVSEEEERKLFSVPSQLRAFTVPSVELSSAKPSQTSHLPTSLAADRTLHSTRSRADYPQ
SHVSSDTASHTPSVSITGAFSNSVSLKMGHVKLVSSPGRSEAETVDEPVSEGADDSLDEFRINILSLDGLAPAVS
ENSDLEQEEESAQRQKTAGKIFRAEASTGQDAPRQAQARSWASQGKAASAEGDESEVSEHLSASSASAIQQDSTS
SMQPPSEAPMVNTVSSAYSEDFENSPSLTASEPTAHSKESLDRTLDALSESSSSVKTDLPQTAESRKKSGRHVTR
VLVKDTAVQTPDPAFTYEWTKVASMAAMGPALGGAYVDPTPIANHVISADAIEALTAYSPAVLALHDVLKQQLSL
TQQFIQASRHLHASLLRSLDADSFHYHTLEEAKEYIRCHRPAPLTMEDALEEVNKEL

WO 2004/030615 PCT/US2003/028547

5770/6881 FIGURE 5319A

GGCACGAGGGCAGACGGCGCTGGTGGTCGTTGTGGCGCCGGAGGACGTTCCCCGCGGCCGGAGCCATGGAGA ${\tt CCGAGTTTGAGAAG}$ ${\tt ATG}$ ${\tt ACTATGGAGAAGCAGAAGGACAACCCCAAATTCTCGTTTCTTTTCGGAGGCGAATTCT}$ ACAGTTACTACAAGTGCAAGCTGGCGCTGGAGCAGCAGCAGCTCATCTGCAAGCAGCAGACCCCGGAGCTGGAGC CAGCCGCCACCATGCCACCCCTGCCACAGCCCCCGCTGGCCCCGCCGCCCCATCCCGCCGGCCCAGGGCGCGC CATCCATGGACGAGCTCATCCAGCAGAGCCAGTGGAACCTCCAGCAGCAGCAGCAGCACTTGCTGGCGCTCAGAC AGGAGCAAGTGACAGCGGCCGTGGCCCACGCGGTGGAGCAGCAGATGCAGAAGCTTCTGGAGGAGACCCAGCTAG ACATGAACGAGTTTGACAACCTCCTGCAGCCCATCATCGACACGTGCACCAAGGACGCCATCTCGGCCGGGAAGA CTGATGGGGCACACTTCGAGCTGCGGCTGCACCTCATCTACCTGATCAATGACGTGCTGCACCACTGCCAGCGCA AGCAGGCCCGGGAGCTGCTGGCCGCCCTGCAGAAGGTCGTGGTGCCCATCTACTGCACCAGCTTCTTGGCCGTGG AGGAAGACAAGCAGCAGAAGATCGCCCGGCTCCTGCAGCTCTGGGAGAAAAACGGCTACTTCGATGACTCCATCA TTCAGCAGCTACAGAGCCCAGCCCTGGGGCTTGGTCAGTACCAGGCCACCCTCATCAACGAGTACTCCTCAGTGG TCCAGCCGGTGCAGCTGGCCTTCCAGCAGCAGATCCAGACCCTCAAGACGCAGCACGAGGAGTTTGTCACCAGCC TGGCCCAGCAGCAGCAGCAGCAACAGCAGCAGCAGCAGCTCCAGATGCCGCAGATGGAGGCTGAAGTCAAGG CCACGCCTCCACCGCCTGCTCCACCCCGGCCCCAGCACCTGCCCTGCCATCCCGCCCACCACCCAGCCTGATG ACAGCAAGCCTCCCATCCAGATGCCTGGCTCTTCAGAGTACGAAGCTCCAGGAGGGGTCCAGGATCCTGCAGCTG TGGCTCCTTGGGGCCAGCAGCAGCCGCCAGAGCAGCCACCCTACCCGCACCACGAGGGCGGCCCACCCCACTGCC CCCACCAGCAGCACCCGCAGTTCAACCAGCCTCCGCACCCCCACAACTTCAACCGCTTCCCGCCCCGCTTCATGC AGGACGACTTCCCGCCACGGCACCCCTTCGAGCGGCCGCCCTATCCCCACCGCTTCGACTACCCCCAGGGGGACT TCCCTGCCGAAATGGGGCCCCCTCACCACCACCACCACCGCATGCCTCATCCTGGCATCAACGAGCACCCGC CTTGGGCTGGACCCCAGCACCTGACTTCGGCCCTCCCCCCATGGCTTCAACGGGCAGCCCCCACACATGCGGC GACAGGGCCCGCCCACATCAACCACGATGACCCCAGCCTGGTCCCCAATGTGCCCTACTTCGATCTCCCTGCTG GGCTGATGGCCCCCCTCGTGAAGCTGGAAGATCACGAGTACAAGCCTTTGGACCCTAAAGACATCCGCCTCCCAC GGAACAGTGAAGGCTGGGAGCAGAACGGCCTCTATGAGTTCTTCCGAGCAAAAATGCGGGCCCGGCGGAGGAAAA GCCAGGAGAAGAGGAACAGCGGACCCTCGAGGTCTCGGAGCAGATCCAAGAGTCGAGGGCGTTCTTCCTCCCGCT CCAACTCAAGATCCTCCAAGTCTTCAGGCTCGTACTCAAGGTCAAGGTCGCGCTCCTGCTCCCGTTCCTACTCCC GCTCCAGATCTAGAAGTCGGAGCAGGTCGCGCTCCTCCAGAAGCCGCTCCCGGTCCCAGTCGCGGTCCCGGTCCA AGTCGTACTCCCCAGGAAGAAGACGCCGGTCACGGTCCAGGAGCCCCACCCCGCCTTCCTCTGCTGGTCTGGGTT CTAATTCGGCGCCTCCCATTCCTGACTCAAGGCTCGGAGAAGAGAACAAAGGCCATCAGATGCTGGAAGATGG GCTGGAGCGGCTCAGGCGGCCTCGGTGCGAAGGAGCAAGGGATCCAGGACCCCATCAAGGGCGGGGACGTCCGGG ATAAGTGGGACCAGTATAAAGGCGTGGGCGTGGCTCTGGATGACCCCTATGAGAACTACCGCAGGAACAAGAGCT GCGGTGCCGGCTGTGGGACCTTCCTGGCTGACTGGCAGAGGAAGATTGCAGTGACAGCTCAGTTCTTACACCGTC TCCACTTGTGGAGAGCCACAGGAAGAAGGAAGACCAGCGCATGCCCAGTGGGAACGCCGTGCTCCATGGCGTG GAGGGCACGGGTGCCACCCACAAACCACACCAGGAGGCGCTGCAGCCACGAGGCCCCAGGCTCGTTTTCCTTTA TAAGTCAGATTGAAGCCTCCTAGGCTCCAGGAGGAGCATGTGCAGGAAGGGTTGGCCTGAGCCAGAGCCGGC ACCCCAGCTCCTTCCTCCAGCTCCCGCACCCACCGGCCCTGACCTGGCTTCCCCTCGGCTGTGTAGGGACAAAG CCGAAGCCCAGTGCCATGACTGCCCGCGGATTGAAAAACAGAAACACAAAACTTTGACTTGACTTGCGAAGTGAA ATTCTGAAACCTAATTCTTCGAAGGCGTACTGGCCCTTAGTTCAGTTATTTTAGTTGTATAAGTTGATATTTTTT TTCTGGAATGTAGCCATTTGCTGTTATCTGGGAAACAAGATTCTAACAGGAAACCAGCCTAAGACACTTCAGGTT

5771/6881 FIGURE **5319B**

 $\verb|CTCGGGCCCGGACCCAGTCCGCATCCGTCGTCCGGCCCGCTGCTGCCGCCGCGCTTCTACCCGCGCTACGTGCT|\\$ ACCGCTCGCCTTCGGCAAGTACTTCGCGTCCGTGTCAGCGCACGTCAGCATCTGGAAGGTGCCCGTGTCCTATGC CAAGGTATACTTGTCACTCATCCCCATCATCAGCGGTGTCCTGCTGGCCACCGTCACCGAGTTGTCTTTTGACAT GTGGGGACTCGTCAGCGCCCTCGCCGCCACGCTGTGCTTCTCGCTTCAGAACATTTTCTCCAAAAAAGGTCTTGCG AGATTCACGGATCCACCATCTCCGGCTGCTCAACATCCTGGGCTGCCACGCCGTCTTCTTTATGATCCCCACCTG GCTCCTGGCTGTCAGCGGCTTCTGTAACTTTGCCCAGAATGTTATCGCCTTCAGCATCCTCAACCTCGTTAGCCC CCTGAGCTACTCGGTCGCCAATGCCACCAAAAGAATCATGGTCATCACGGTGTCCCTGATCATGCTGCGCAACCC AGTCACCAGCACCAACGTCCTGGGCATGATGACCGCCATCCTGGGGGTCTTCCTCTATAACAAGACCAAGTACGA TGCAAACCAGCAAGCCAGGAAGCACCTCCTCCCCGTCACCACAGCAGCAGCAGCAGCAAGGAGCGTCACCGGAG CCCACTGGAGAAGCCCCACAACGGCCTCCTCTTCCCCCAGCACGGGGACTATCAGTACGGCCGCAACAACATCTT AACAGACCACTTCCAATACAGCCGGCAGAGCTACCCAAACTCGTACAGTTTGAACCGCTATGATGTG**TAG**AGTCC AAAGGACAGGACCAGACTGTTGGTGACTCCTTCCCCGGCCCCCACAGCAGTATCAGAAACTTCTGACAATCAGTG AATGTACAACCCAGCCGAGGGGACGGTGCATAACTCTCCATCAGAAGCCCTGGGGTTCCTGGCCCCCCGTGAGCC GCAGGAGGATGCGTTGCCTGCAGTGCAGACGGCCGTGAGCTCTGGGCAAACCTAAACAGAGACCAGTGTCTCATG CTCTTTCTTCCTGGAGTCTGTCATCTGAGGGCCGTGTCCCTGCGGAGATCTTGGCCACGTTGTACCTTTCCATGT GGAATTATTCCCCAAGCAGTGTAGCTCAGAGCACTTGTGTCTGCATTCCAGATAACATTCAGGACCTGTGTGAAA AGCTGGGGTCACTGTGGCTGTAGACCATGAACTGGCAGTGGGGGTGTCCAGGGCGGTGCTTGAGAACGTCAGACT GGCTAGTTTAATTCCCTGGCGCAGATACGCATAGGACCAACAGGGTCACCAAGCAGACAGGAGCCCGCGAGAAT CATTCAAAACATCCCCAGCCACAGAGATGGATCCAGTTTCCTGGTCATCCCCTTAGCAGTTCACAAGTTCCTGGC AAATGTTCCAAAGCAAAAAGCGATTGCAATTAGCATCCAGTTCCTGCAGCCTGGTGCTCTGCCCTGCACGTCAGG GTTGGCATCCACCCAGATCCAGATGGAAGGGAAACTTCTCTCTTCTCCTTTGCCTCCTCTCTCCCCACCAGAGCA GGGCGCTTCTCTTGGGGTGGTGAGAAGGATCTTCGAGAAATCGTGTTCAGTATTTCAAGCTCTATTTCTGTGGCA CATGTCTTTTGAGAGGCATCTTCACCTCTTCTGTGATGACTTGGTATGTTTTTTGGTAGAGAGATCTTGATTTTC TGCATTAGGACTGGCCTATGCATCGAAAATCTTTTTGTTATAAACGTTTAAAAACAAAGTTCCCCGGCCAGGCA CAGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGATGGGCGGATCACGAGGTCAGGAGTTCGAGACC AGCCTGGCCAACATAGTGAAACCCCATCTCTACTAAAAATACAGAAATTAGCCGGGCATGGTGTCGCGTGCCTGT AGTCCCAGCTCCTCAGGCTGCTGAGGCAGGCGAATTGCTTGAACCTGGGAGGCAGAAGTTGTGGTGAGCCGAGAT GATGCCTGTCTGACACGTTTTGGTATTTAGTAGGAAATGAAGTGTTTCGAAGCTTCGAGAAAGCTTCAAAATTG TCACAATTGCTGAAAACAGAATGAATCGTGAACATTATCTCAATATTTTGTATAATAGACAAGACCACAGTGTTT TGGTTCCCTGACCTGTTTTTGTGTTTATGTTAGGATCTGAATCATGTTCTGGGTAAGGGGACGAGGAGCGAACAC TGCACTAAGATTTGGTTTGCCAAATCAGATTCTTTGGTCAAGAGTCAGTTTGGGGCCCAGGCGTGGTGGCTCATGC CTGTAATCTCAGCACTTTGGGAGGCTGAGGTGGGTGGATCACTGGAGTTTGAGACCACCCTGGCCAACATGGTGA GAGGCAGGAGAATCACTTGAGCCCAGGAGGTGGAGGTTTCAGCGAGCTGAGATCACCACCACTGCACTCCAGCCTT GGTGACAGAGTGAGACTCTGTCTC

MPIWVVLLSRIIMKEKQSTKVYLSLIPIISGVLLATVTELSFDMWGLVSALAATLCFSLQNIFSKKVLRDSRIHH LRLLNILGCHAVFFMIPTWVLVDLSAFLVSSDLTYVYQWPWTLLLLAVSGFCNFAQNVIAFSILNLVSPLSYSVA NATKRIMVITVSLIMLRNPVTSTNVLGMMTAILGVFLYNKTKYDANQQARKHLLPVTTADLSSKERHRSPLEKPH NGLLFPQHGDYQYGRNNILTDHFQYSRQSYPNSYSLNRYDV

GGCACGAGGGGAACATCTTCATGATGTTCTGCATGATTGTGCTGTTCGGCTCTTGAATCCCAGCGATGAAACCAG GAACTCACTTTCCCGGGATGCCGAGTCTCCATTCCTCCATTCCTGATGACTTCAAGAATGTTTTTGACCAGAAAA CGTTTATGTAAGGGGCTGTGATGAAATTGCATTCCCCATAGATAAAAGAAAAATCATTTCTATCCAGAGATCTGA GCAGAAGGATTGGCTTGTTAGTTTAACACAGCCGTATTTTTGGACATTCAGTGTTACTTGCTGAGTCTGACAGCC CTGCGATTAACCCTAAAGGCTTTAAGGAACGGGCCACCTGTAACAGAGACACCAGCCTTCCTGTATAGACACTAA ATTGTTAGCAAGAGTGTTGAGCTAGTTCCTGGTGAAGTGTTTCCACAGAAGACATGTGGAGCAGTTGTGGGGATA AGGAATGAGAGTGATTTTATGATGTGGTACATTGGGACCATGTTCTAAAACCTTGGGTTTCTGAGTCTGCTTTTT GAGTAGGTGATTTTGAGGTTGAAAAACCAGGGGCCTTCATCTAGGAAATACAGCATTTTCCAGAAGCTTCTTTGA AAGGGAATCCTGGTTTTGTTGCCAAAATGAAACGCCCGGGGTTGGCGCTGAATCCCACAACTGTGTGATTTGCTT GTTGAGTTTTTTGTTGTCTGGTTTTTTTTGTTTGTTTATACCAATAAGAATGAGCCTGAATGTTGGTGGTTT TTGAAATCCTGACTTGGAGGTAAACCTGGAGGAAGGAAAAAAAGTAAATATGCAGGCTTTTAGGACTGAGTAGCC

 ${\tt MPSLHSSIPDDFKNVFDQKTDNLPRKSKLVVGGKVFAEVCMVSQPRPCFQR}$

5777/6881 FIGURE 5325A

ATGAGTGTGAAAGAGGCAGCCAGGCCGGGCCGGGGAGCAGGCGGCCTACCACCTGCACATCTACCCCCAGCTG TCCACCACCGAGAGCCAGGCCTCGTGCCGCGTGACTGCCACCAAGGACACCACCTCGGACGTCATCAAGGAC GCCATTGCCAGCCTGCGGCTGGACGGCACCAAATGTTATGTGCTGGTGGAGGTCAAAGAGTCGGGAGGCGAGGAA TGGGTGCTGGACGCCAACGACTCGCCTGTGCACCGGGTGCTGCTATGGCCCCGGCGGGCACAGGACGACCACCCT CAGGAGGATGGCTACTTCCTGCTGCAGGAGCGCAACGCAGATGGAACCATCAAGTACGTGCATATGCAGCTG GTGGCGCAGGCCACACCCGGCGCCTAGTGGAGCGTGGCCTCCTGCCACGGCAGCAGGCGGACTTTGATGAC CTGTGTAACCTCCCCGAGCTAACCGAGGGCAACCTCCTGAAGAACCTCAAGCACCGCTTCCTGCAACAAAAGATC TACACGTACGCGGGGAGCATCCTGGTGGCCATCAACCCCTTTAAGTTCCTGCCCATCTACAACCCCAAGTACGTG AAGATGTATGAGAACCAGCAGCTGGGCAAGCTGGAGCCACACGTCTTCGCGCTGGCCGACGTGGCCTACTACACC ATGCTCAGGAAGCGCGTGAACCAGTGCATCGTGATCTCGGGTGAGAGCGGCTCCGGCAAGACCCAGAGCACCAAC TTCCTCATCCACTGCCTCACCGCCCTCAGCCAGAAGGGCTACGCCAGCGGCGTCGAGAGGACCATCCTGGGTGCT GGCCCTGTGCTGGAGGCTTTTGGAAATGCCAAGACAGCCCACAACAACAACTCCAGCCGGTTTGGGAAATTCATC CAAGTCAGCTACCTAGAGAGTGGCATCGTGAGAGGAGCTGTCGTCGAGAAATATCTGCTTGAAAAGTCTCGCCTG GTGTCTCAGGAGAAGGATGAGAGGAACTACCATGTGTTTTATTATTTGTTACTTGGGGTCAGCGAGGAAGAGCGC CAAGAATTTCAGCTCAAGCAGCCTGAAGATTATTTCTACCTCAACCAGCATAACTTGAAGATTGAAGATGGGGAG GACCTGAAGCATGACTTTGAGAGGCTCAAGCAGGCCATGGAGATGGTGGGCTTCCTCCCCGCCACCAAGAAGCAG ATTTTTGCCGTCCTCTCGGCCATCCTGTACCTGGGCAACGTCACTTATAAGAAGAGAGCTACAGGCCGAGAGGAA GGGTTGGAGGTCGGGCCACCCGAGGTGCTGGACACCCTGTCGCAGCTTCTGAAGGTGAAGCGAGAAATCTTGGTG GAGGTTCTGACCAAAAGAAAACGGTGACCGTCAACGACAAGCTTATCCTTCCCTACAGCCTCAGCGAGGCCATC ACTGCCCGCGACTCCATGGCCAAGTCTCTGTACAGCGCCCTGTTCGACTGGATTGTGCTGCGGATCAACCACGCA CTCCTCAACAAGAAGGACGTGGAAGAGGCAGTCTCGTGCCTGTCCATTGGGGTCCTGGACATCTTCGGGTTTGAA GACTTCGAGAGGAACAGCTTTGAGCAGTTCTGCATCAACTACGCCAATGAGCAGCTGCAGTATTACTTCAACCAG CACATCTTCAAGCTGGAGCAGGAGGAATATCAGGGCGAGGGGATCACGTGGCACAACATCGGCTACACAGACAAT GTCGGCTGCATCCATCACCAGGAAAACCCACGGGCCTCTTCTACCTGCTGGACGAGGAGAGCAACTTCCCC CACGCCACGAGCCAGACCCTGCTGGCCAAGTTCAAACAGCAACATGAGGACAATAAGTACTTCCTGGGCACCCCG GTCATGGAGCCAGCTTTCATCATCCAGCACTTCGCAGGGAAGGTGAAATATCAGATCAAGGACTTCCGGGAGAAG AACATGGACTACATGCGGCCAGACATCGTGGCCCTGCTGCGGGGCAGTGACAGCTCCTACGTGCGGGAGCTCATC GCCGGACGCCTGCGGGCCGAGAGGGCCGAAAAGGCTGCAGGTATGAGCAGCCCTGGTGCCCAAAGTCACCCAGAA GAGCTGCCAAGAGGAGCCAGCACCCCTTCGGAAAAACTTTACCGCGATTTGCATAACCAAATGATCAAGAGCATC AAAGGATTGCCCTGGCAGGGCGAGGACCCCCGTAGCCTTCTCCAGTCCCTCAGTCGGCTCCAGAAACCCCGCGCC TTCATCCTGAAAAGTAAAGGTATCAAACAAAAGCAGATCATTCCAAAGAACCTACTGGACTCCAAGTCCCTGAAA CTCATCATCAGCATGACTCTGCACGACCGCACCAAGTCCCTACTGCACCTGCACAAGAAGAAAAAGCCACCA AGCATCAGCGCCCAGTTCCAGACATCCCTTAACAAGCTCTTGGAGGCACTGGGGAAGGCGGAGCCCTTCTTTATC CGCTGCATCCGTTCCAATGCTGAAAAGAAGAGCTGTGCTTTGACGACGAGCTGGTCCTGCAGCAGCTGCGCTAC ACCGGCATGCTGGAGACCGTGCGCATCCGGAGGTCAGGGTACAGCGCCAAGTACACGTTCCAGGATTTCACCGAG CAGTTCCAGGTGCTCCTGCCCAAGGATGCCCAGCCCTGCAGGGAGGTCATCTCCACCCTCCTGGAGAAAATGAAG ATAGACAAGAGGAACTACCAGATCGGGAAGACCAAGGTCTTCCTGAAGGAGACGGAGCGGCAAGCCCTGCAGGAG ACGCTGCACCGGGAGGTGGTGCGGAAAATCCTGCTGCTGCAGAGCTGGTTCCGGATGGTGCTGGAGCGTCGGCAC TTCCTGCAGATGAAGCGGGCCGCCGTCACCATCCAGGCCTGCTGGCGGTCCTACCGGGTCCGGAGGGCGCTGGAG AGGACGCAGGCTGCCGTGTACCTCCAGGCCTCATGGAGGGGCTACTGGCAGCGGAAGCTCTACCGGCACCAGAAA CAGAGCATCATCCGCCTGCAGAGCCTGTGTCGGGGGCACCTGCAGCGCAAGAGCTTCAGCCAGATGATCTCGGAG AAGCAGAAGGCAGAAGAAGAGAGAGGGAAGCCCTGGAAGCCGCAAGAGCAGGTGCTGAGGAGGGCGGACAGGGT CAGGCGGCTGGAGGCAGCAGGTAGCTGAGCAGGGGGCCGGAGCCAGCGGAGGATGGCGGGCACCTGGCATCGGAG CCTGAGGTGCAGCCAAGTGACAGGTCCCCCCTAGAGCACTCCTCACCTGAGAAGGAGGCCCCAAGCCCAGAGAAG ACTCTCCCACCCCAGAAAACCGTGGCGGCTGAAAGTCACGAGAAAGTCCCCAGCAGCCGGGAGAAGCGTGAGTCG

5778/6881 FIGURE 5325B

GAAACCCTTCTAGTCGTAGAGACGGAGGCTGAGAACACATCTCAAAAGCAGCCCACAGAGCAACCCCCAGGCCATG GCAGTTGGCAAGGTCTCTGAAGAAACTGAGAAGACGCTGCCCAGTGGGAGCCCCAGGCCTGGCCAGTTGGAGCGG AGCAAACCATGTGGCAGCCCAAGGGTTCAGGAAAAGCCCGACAGCCCCGGAGGCTCCACGCAGATCCAGCGGTAC CTGGACGCCGAGCGCCTGGCCAGCCCTGGAACTGTGGCGGGGCAAGAAGCTGGTGGCCGCCGCCAGCCCTAGT GCCATGCTCAGCCAGTCCCTGGACCTCAGCGACAGACACCGGGCCACAGGGGCCGCCCTCACGCCCACAGAGGAG AGGCGCACCTCCTTCTCCACGAGCGACGTCTCCAAGCTCCTCCCGTCCCTGGCCAAGGCTCAGCCTGCAGCAGAA ACCACGGACGGAGAGCGAAGTGCGAAAAAGCCAGCTGTCCAGAAGAAGAAGAAGCCAGCGACGCATCCTCCCA GACGCAGGGCTGTCCCCGGGCTCTCAGGTCGACTCTAAATCCACGTTTAAGAGGCTTTTTCTGCATAAAACCAAG GATAAAAAATACAGCCTGGAGGGCGCAGAGGAGCTGGAGAATGCAGTGTCCGGGCACGTGGTGCTGGAAGCCACC ACCATGAAGAAGGGCCTGGAAGCCCCCTCCGGACAGCAGCATCGCCACGCTGCAGGTGAGAAGCGCACCAAGGAA CCAGGAGGCAAAGGGAAGAAGAACCGAAATGTCAAGATTGGGAAGATCACAGTGTCAGAGAAGTGGCGGGAATCG GTGTTCCGCCAGATCACCAACGCCAATGAGCTCAAGTACCTGGACGAGTTCCTGCTCAACAAGATAAATGACCTC CGTTCCCAGAAGACGCCCATTGAGAGCTTGTTTATCGAAGCCACCGAGAAGTTCAGGAGCAACATCAAAACGATG TACTCTGTCCCGAACGGGAAGATCCACGTGGGCTACAAGGATCTGATGGAGAACTACCAGATCGTCGTCAGCAAC CTGGCCACTGAGCGTGGCCAGAAGGACACCAACCTGGTCCTCAACCTCTTCCAGTCACTGCTAGATGAGTTCACC CGTGGCTACACCAAGAACGACTTCGAGCCAGTGAAGCAGAGCAAAGCTCAGAAGAAGAAGCAGGAAGCAGGAGCGT GCTGTCCAGGAGCACAACGGGCACGTGTTCGCCAGCTACCAGGTTAGCATCCCGCAGTCGTGCGAGCAGTGCCTC AAGATTCAGAGCCACTGCTCCTACACCTACGGGAGGAAGGGCGAGCCAGGCGTTGAGCCTGGCCACTTCGGCGTG TGCGTAGACAGCCTGACCAGCGACAAGGCCTCGGTGCCCATCGTGCTGGAGAAGCTCCTGGAACACGTGGAGATG CACGGCCTGTACACCGAGGGCCTCTACCGCAAGTCGGGTGCTGCCAACCGCACTCGGGAGCTCCGGCAGGCGCTG CAGACAGACCCCGCAGCAGTCAAGCTGGAGAACTTCCCCATCCACGCCATCACAGGGGTGCTGAAGCAGTGGCTG CGGGAGCTGCCCGAGCCCCTCATGACCTTCGCACAGTACGGCGACTTCCTCCGAGCCGTCGAGCTGCCGGAGAAG CAGGAGCAGCTGGCTGCCATCTATGCCGTCCTGGAGCACCTTCCAGAAGCCAACCACAACTCCCTGGAGAGACTC ATCTTCCACCTTGTCAAGGTGGCCCTGCTCGAGGATGTCAACCGCATGTCACCTGGGGCGCTGGCCATTATCTTC GCACCCTGCCTCCTGCGCTGCCCTGACAACTCGGACCCGCTGACCAGCATGAAGGACGTCCTCAAGATCACCACG TGCGTGGAGATGCTGATCAAGGAGCAGATGAGGAAATACAAAGTGAAGATGGAGGAGATCAGCCAACTGGAGGCT GCAGAGAGTATCGCCTTCCGCAGGCTTTCGCTCCTGCGACAAAATGCTCCATGGCCTCTCAAACTGGGGTTTTCG TCTCCCTATGAGGGGGTCCTGAACAAGAGCCCCAAGACCCGGGACATCCAGGAGGAGGAGCTGGAGGTGCTGCTG GAGGAGGAGGCAGCCGGCGATGAGGACCGGGAAAAGGAGATTCTCATTGAACGGATCCAGTCCATCAAGGAG GAGAAGGAGGACATCACCTACCGGCTGCCGGAGCTGGACCCAAGGGGCTCGGACGAGGAGAACCTGGACTCGGAG CTCCCTTGCCCCGGCGCGCCCACCCGAGCCCCCTCCCCACCGTGGCCGCCCCTCCACGACGAAGGCCGTCGTCC TTCGTAACGGTCAGAGTGAAGACCCCCCGGCGGACCCCCATCATGCCCACGGCCAACATCAAGCTCCCACCAGGC CTGCCCTCCCACCTGCCTCGCTGGGCACCGGGTGCCCGGGAGGCGGCTGCCCCAGTGCGGCGCCGGGAGCCACCT GCCCGCCGCCCGGACCAGATACATTCCGTGTACATCACGCCCGGGGCAGACCTGCCAGTGCAGGGCCCCTGGAG GCCTCGGGCCAGACCAATGGCTGAGAGCCACAGCTGACAAAGTCTGCATGTCCGAGGACGGCCCCTGCACTGGAG CTGGGCGCCAGAGCTGCAGAGCTAGTGTTCGGCCCTCAGAGAAGGATCCAGAATCAAAAGCTCAAGAGTGACGTG CCCAAATCATGGACGCACCTGTGGGGAGCACCACATCTCCACCTGCGGCCTCACATCTCCCCACTCCCCTTTTTG TACGTTTAACTGTTTCTTTGTACGTGGTTTACGTAACTTTAAACTGTAACAGCCTTAATGGAAGACCAAATGGTT TTTTATATGTGTATGTACAAAGTTTTCTATTAACGCTGCCCGTCTCCCTTATAACCTGGACGTGAGCTGTCAGAG CAGAAGCCACTAGGCCACTGCGCGTCTGAGGCTCAGACCCTGCTGTGGTTGGCTTGGGGTGGCCAATGGGCTGGG ACCCTCCATGAGAGTTTTGGACACTTGGGTCACCTGACCCGTGCCTCTCTGACACATGTCTCCGGGGGGCAGCCA CCTGGCCAATGTGCATTTTTGCACATGCTGGAACCTTCCATGGGGGTCTGGGCTATTGGCTGGAGCCAGGACATG AGTCAGGGGCACCATGGACCTCACGTGCCAGGGAGACTTGAATGTGGCTGTCACTCTTCCGGACGCCAAGGGCTG

5779/6881 FIGURE 5325C

CAGGAGGCTGCTTTTGGCACTACCCACCCCGTGTGACAGAATAGGAGCCAGCGACTCAGGACTGCTCACGGGTCA GGAGGGCAACGCCTGAAGTCAGACCTCCCTATAGGTCAACAGGGACAACCTGGGGATCTCTGGAGCAGGGCCCTC CTCTCTCAGGCTTGGCCCACTCCCCCAGACACCTGGACACGTGGCCACAAATCTGGGACAAGGGGCCCCCGCACA GCATGAAATAAAAAGTGCCTGAGAAGTGTG

CCCACTGAAGAGGAGGAGGAGGAGGAGCACTCGGCAGAGCCTCGGCCCCGCACTCGCTCCAATCCTGAAGGG GCTGAGGACCGGGCAGTAGGGGCACAGGCCAGCGTGGGCAGCGAGGGTGAGGGTGAGGCCGCCAGTGCT GATGATGGGAGCCTCAACACTTCAGGAGCCGGCCCTAAGTCCTGGCAGGTGCCCCGGCCAGCCCCTGAGGTCCAA ATTCGGACACCAAGGGTCAACTGTCCAGAGAAAGTGATTATCTGCCTGGACCTGTCAGAGGAAATGTCACTGCCA AAGCTGGAGTCGTTCAACGGCTCCAAAACCAACGCCCTCAATGTCTCCCAGAAGATGATTGAGATGTTCGTGCGG ACAAAACACAAGATCGACAAAAGCCACGAGTTTGCACTGGTGGTGGTGAACGATGACACGGCCTGGCTGTCTGGC CTGACCTCCGACCCCGCGAGCTCTGTAGCTGCCTCTATGATCTGGAGACGGCCTCCTGTTCCACCTTCAATCTG GAAGGACTTTTCAGCCTCATCCAGCAGAAAACTGAGCTTCCGGTCACAGAGAACGTGCAGACGATTCCCCCGCCA TATGTGGTCCGCACCATCCTTGTCTACAGCCGTCCACCTTGCCAGCCCCAGTTCTCCTTGACGGAGCCCATGAAG AAAATGTTCCAGTGCCCATATTTCTTCTTTGACGTTGTTTACATCCACAATGGCACTGAGGAGAAGGAGGAGGAG ATGAGTTGGAAGATATGTTTGCCTTCATGGGCAGCCTGGATACCAAGGGTACCAGCTACAAGTATGAGGTGGCAC TGGCTGGGCCAGCCCTGGAGTTGCACAACTGCATGGCGAAACTGTTGGCCCACCCCCTGCAGCGGCCTTGCCAGA GCCATGCTTCCTACAGCCTGCTGGAGGAGGAGGATGAAGCCATTGAGGTTGAGGCCACTGTCTGAACCATCCCTG TACATCTGCACCTTCTTGTGCAAGGAAGTCCTTGGCCTAAAGCCTTGGTTCTCAAACTGGGTTCCTTGGGACCTC $\tt CGGGGTGGGGGGGTTCCAGGAGGCACG{\color{blue}{\textbf{TAG}}} GGTACCTTGCAGGGTCCTAGGAGGGAAACCCAGGATTCCAGGAGG$ GATCCCAGGAACTGTGGGCACCCATTTTCTGTGTCTCCCAGCCCATTTCCACTCCTAGTTTGTCATGGATAATTT AAAAAA

MEVAEPSSPTEEEEEEEHSAEPRPRTRSNPEGAEDRAVGAQASVGSRSEGEGEAASADDGSLNTSGAGPKSWQV PPPAPEVQIRTPRVNCPEKVIICLDLSEEMSLPKLESFNGSKTNALNVSQKMIEMFVRTKHKIDKSHEFALVVVN DDTAWLSGLTSDPRELCSCLYDLETASCSTFNLEGLFSLIQQKTELPVTENVQTIPPPYVVRTILVYSRPPCQPQ FSLTEPMKKMFQCPYFFFDVVYIHNGTEEKEEEMSWKICLPSWAAWIPRVPATSMRWHWLGQPWSCTTAWRNCWP TPCSGLARAMLPTACWRRRMKPLRLRPLSEPSLYICTFLCKEVLGLKPWFSNWVPWDLRGGGVPGGT

MASTSYDYCRVPMEDGDKRCKLLLGIGILVLLIIVILGVPLIIFTIKANSEACRDGLRAVMECRNVTHLLQQELT EAQKGFQDVEAQAATCNHTVMALMASLDAEKAQGQKKVEELEGEITTLNHKLQDASAEVERLRRENQVLSVRIAD KKYYPSSQDSSSAAAPQLLIVLLGLSALLQ

TTCCGGCGGAAGTTGCTGGGCGCGAAAGCCGGCAAGACCTTTTTTTCCGCCATCATCGCTCACGCGCGCAACCC TGGCGACGCGTGGTGGCGAGGCTCCGCCTCCCCACGCCATTGGCCAGCAGCTCCTCGGGCACGCGTATACTGCGC TTCCGGGCAATCTCCGCCCCCCCCCCCCCGCATGGCCTTCTGGGAGTTGTAGTTCGGTCGCGAGCGCTGCCGTCGG CGGGACAGACTCGGCGCCGCCGGCCTGGCCTGGCCTGGTCGTCGGCCTCTGCACCCCCGCCGCGGGGGTTCAGCGC GATCTCCTGCACCGTCGAGGGGGCACCCGCCAGCTTTGGCAAGAGCTTCGCGCAGAAATCTGGCTACTTCCTGTG CCTTAGTTCTCTGGGCAGCCTAGAGAACCCGCAGGAGAACGTGGTGGCCGATATCCAGATCGTGGTGGACAAGAG CCCCCTGCCGCTGGGCTTCTCCCCCGTCTGCGACCCCATGGATTCCAAGGCCTCTGTGTCCAAGAAGAAACGCAT GTGTGTGAAGCTGTTGCCCCTGGGAGCCACGGACACGGCTGTTTTGATGTCCGGCTGAGTGGGAAGACCAAGAC AGTGCCTGGATACCTTCGAATAGGGGACATGGGCGGCTTTGCCATCTGGTGCAAGAAGGCCAAGGCCCCGAGGCC CTGCAGCCCCTGGCCTTCTCTGCTTTTGGGGACCTGACCATCAAGTCTCTGGCGGACATTGAGGAGGAGTATAA CTACGGCTTCGTGGTGGAGAAGACCGCGGCTGCCCGCCTGCCCCCAGCGTCTCATAGTCCCTCACCCTTCCGCG GAAAGAGCCCCTTACTCCACCTCCCGCCAGCCTGGGGCCACCCCCCTCACTGCATCCTGGGGCCACCCCCAC TCACTGCATCCTGGGAACCTTCGCCCTGCAAGGCGTTTGCTATCTTCAGCCACTGGGCGGAGCTGCAGCCCTGGA GGAGGGGGCGGGTCGAGGCTGCGTGGTGATGGGGTCTCCGCCCCCACGCCCTGCCGGGCAGGGCTGGAGCTGGAC AGAAGCCAGTGCCTTTAAGTCATTTGTGTCAAAACCCTCTGGGGTCCGGAGGCTGTGCGGGTGTCCTCCTGGCAA TAAACACTACCCGGTTCTCGCC

GCTTCCTCCTCCCCGCCGCCCCCCCCCATGGCCGCCCGGGCCCCGGGCCTCATCTCGGTGTTCTCGAGTTCCC AGGAGCTGGGTGCGCGCTAGCGCAGCTGGTGGCCCAGCGCGCAGCATGCTGCCTGGCAGGGGCCCGCGCCCGTT TCGCGCTCGGCCTGTCGGGCGGGAGCCTCGTCTCGATGCTAGCCCGCGAGCTACCCGCCGCCGCCGCCCCTGCCG GGCCAGCTAGCTTAGCGCGCTGGACGCTGGGCTTCTGCGACGAGGCGCCTCGTGCCCTTCGATCACGCCGAGAGCA CGTACGGCCTCTACCGGGTGAGAGCTACGGGGGCCCGCGGGGATCACGCCGAGAGGGCCACAGCCACCGCCTACA CCCCGGCTACGGAGGCCGCCGGGGGCCATGCCGAAAGGGCCGCCCCACTGTCTGCACCTCGGCTACGGGGGCCA CTGGGTATCATGCCAAGAGGGCCGTGCCCACTGCCTGCACCTCGGCTACGTGGGTCGCTGGGGGTCATGCCAAGA GGGCCGCCCCCCGGTTGCCCTCGGCTACGGGGGCCACTGGGGGTCATGCCGAGATGGTCACGCCCACTGCCTG $\tt CCCGCAGGACCTCACTGCGCCTCTGCCTTTATCTAGGCAGGGCTAGAAATGGTCTACTTGCAGTCCGTCTTCCT$ GCTTCATCCGGTGGCCAGGCAGGGGAACGGCACGGGCAAGGGCCTGGAAGGGAATCCGAGTGGCCCATGTCAAA CGATGCCCATAACTCAGCCCCGTAGCGGACGGGGCACGAGGAATCAGGTGTAGAGCCTGAATCTCAGGGTCCTG ATCTCTAACCCCAGCGAGTTCTCGGGGATCCCTGGGCAGCTTTGCCGCTCTGATGGCTCTGCTTCCAGGCTGTTC ATCTTTGGCTTTGAGCCTCAGGATTCTATAGAATCAGAGGGGGGCGCCCCTCTTTTAAAGACAGGGTAACTGAGGCTT CTGGCAGCGTCAAGGGACACCCCATGCTGGGTGTGCCGTCTTCTCTTTGCATAGAATCTTGAGCTGATGATGGTT TTGTGGGTTTTTTATTAAGAGAAAAGGCTTACTGAACGCTTTATATGCATCAATTCATGAGTCCGTACCACAGCC TATGAGATGTTACACTCATTTCACAGATGGAGAAACTGAGGCCAGAAGAGGTGAGCTTACCTGCCCAAGGCATCT AGTGACCAGAGGGGCAGCCAGGGTGTGATCCTGCCTCATCTGACTTCGTAGTTGGGTACACATTTAACTTCCGCC TTCCTGTGTGTGTTTTCCAAGAGCATCATTAAAAAGTTTTGGCCGGGTGCGGTGGCTCACGCGTGTAATCCCAGC ACTTTGGGAGGCCGACGTGAGTAGATCACCTGAGGTCAGGATTTCGAGACCAGCCTGGCCAACATGGCAAAACTC TGTCTCTACTA

GGGAGCCCGGGGCTCCTCACCTACGTCCTGGAGGAGCTCGAAAGAGGCATCCGGTCTTGGGATGTCGATCCTGGC GTCTGCAACCTTGATGAACAGCTCAAGGTCTTTGTGTCCCGACACTCTGCCACCTTCTCCAGCATTGTGAAAGGC CAGCGGAGCCTGCACCACCGTGGAGACAACCTGGAGACCCTGGTCCTCCTGAACCCATCAGACAAGTCCCTGTAT GATGAGCTCCGGAACCTTCTGTTGGACCCTGCCTCTCACAAGCTACTGGTGTTGGCTGGGCTCTGCCTGGAGGAG ACGGGGGAGCTGCTACAGACAGGGGGCTTCTCGCCTCACCACTTCCTCCAGGTCCTGAAGGACAGAGAGATC CGGGACATCCTGGCCACCACGCCCCACCTGTGCAGCCGCCCATACTCACCATCACCTGCCCCACCTTCGGTGAC TGGGCTCAGCCGGCACCCGCTGTGCCTGGCCTTCAGGGGGCGCTCCGGCTCCAGCTGCGGCTGAACCCCCCGGCG CAGCTGCCCAACTCTGAGGGCCTGTGCGAATTCCTGGAGTACGTGGCTGAGTCTCTGGAGCCACCGTCCCCCTTC CTCGGGGATGCCGCCTTCTTCGCCGTCAATGGCTTCACTGTGCTGGTCAACGGTGGCTCAAACCCCAAGTCCAGT GGCCTCAACAGCCTGCTGCGGCGCAAACTGGCGGAGCGCTCCGAGGTGGCTGCTGGTGGGGGGCTCCTGGGACGAC AGGCTGCGCAGGCTCATCTCCCCCAACCTGGGGGTCGTGTTCTTCAACGCCTGCGAGGCCGCGTCGCGGCTGGCG CGCGGCGAGGATGAGGCGGAGCTGGCGCTGAGCCTCCTGGCGCAGCTGGGCATCACGCCTCTGCCACTCAGCCGC CACTTGAGGTTCCTGCGAGAGCCCGTGGTGACGCCCCAGGACCTGGAGGGCCCGGGGCCGAGACCAAAGAG AGCGTGGGCTCCCGGGACAGCTCGAAGAGAGAGGGCCTCCTGGCCACCCTAGACCTGGCCAGGAGCGCCCT TTGAGGAAAGACCCCAAACCGAGTGTCTCCCGGACCCAGCCGGGGAGGTGCGCCGGGCAGCCTCTTCTGTGCCC AACCTCAAGAAGACGAATGCCCAGGCGGCACCCAAGCCCCGCAAAGCGCCCAGCACGTCCCACTCTGGCTTCCCG TCTCCGGCCTCCCAGCTGGTGGCCACGCCCAGCCTGGAGCTGGGGCCGATCCCAGCCGGGGAGGAGAAGGCACTG GAGCTGCCTTTGGCCGCCAGCTCAATCCCAAGGCCACGCACCCCTCCCCTGAGTCCCACCGGAGCCCCGCAGAG CCCACGGTGACCACGCCCTCACTACCCGCAGAGGTGGGCTCCCCGCACTCGACCGAGGTGGACGAGTCCCTGTCG GTGTCCTTTGAGCAGGTGCTGCCGCCATCCGCCCCCACCAGTGAGGCTGGGCTGAGCCTCCCGCTGCGTGGCCCC CGGGCGCGCGCTCGGCTTCCCCACACGATGTGGACCTGTGCCTGGTGTCACCCTGTGAATTTGAGCATCGCAAG GCGGTGCCAATGGCACCGGCACCTGCGTCCCCCGGCAGCTCGAATGACAGCAGTGCCCGGTCACAGGAACGGGCA GGTGGGCTGGGGGCCGAGGAGACGCCACCCACATCGGTCAGCGAGTCCCTGCCCACCCTGTCTGACTCGGATCCC GTGCCCCTGGCCCCGGTGCGGCAGACTCAGACGAAGACACAGAGGGCTTTGGAGTCCCTCGCCACGACCCTTTG CCTGACCCCTCAAGGTCCCCCACCACTGCCTGACCCATCCAGCATCTGCATGGTGGACCCCGAGATGCTGCCC CCCCAAGACAGCACGGCAAACGGAGAACGTCAGCCGCACCCGGAAGCCCCTGGCCCCCCAACTCACGCGCTGC $\tt CGCCCCAAAGCCACTCCAGTGGCTGCCAAAACCAAGGGGCTTGCTGGTGGGGACCGTGCCAGCCGACCACT$ CAAGCAGCATTGGGACCGTGACCTGCAGGTGACCCTGATCCCCACTTTCGACTCGGTGGCCATGCATACGTGGTA CGCAGAGACGCCCCGGCACCAGGCGCTGGGCATCACGGTGTTGGGCAGCAACAGCATGGTGTCCATGCAGGA TGACGCCTTCCCGGCCTGCAAGGTGGAGTTCTAGCCCCATCGCCGACACGCCCCCCACTCAGCCCAGCCCGCCTG TCCCTAGATTCAGCCACATCAGAAATAAACTGTGACTACACTTG

MAAVAGSGAAAAPSSLLLVVGSEFGSPGLLTYVLEELERGIRSWDVDPGVCNLDEQLKVFVSRHSATFSSIVKGQ
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LLEPPTSGGFLRLGRPCCYIFPGGLGDAAFFAVNGFTVLVNGGSNPKSSFWKLVRHLDRVDAVLVTHPGADSLPG
LNSLLRRKLAERSEVAAGGGSWDDRLRRLISPNLGVVFFNACEAASRLARGEDEAELALSLLAQLGITPLPLSRG
PVPAKPTVLFEKMGVGRLDMYVLHPPSAGAERTLASVCALLVWHPAGPGEKVVRVLFPGCTPPACLLDGLVRLQH
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RKDPKPSVSRTQPREVRRAASSVPNLKKTNAQAAPKPRKAPSTSHSGFPPVANGPRSPPSLRCGEASPPSAACGS
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TVTTPSLPAEVGSPHSTEVDESLSVSFEQVLPPSAPTSEAGLSLPLRGPRARRSASPHDVDLCLVSPCEFEHRKA
VPMAPAPASPGSSNDSSARSQERAGGLGAEETPPTSVSESLPTLSDSDPVPLAPGAADSDEDTEGFGVPRHDPLP
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CPE

MKASGTLREYKVVGRCLPTPKCHTPPLYRMRIFAPNHVVAKSRFWYFVSQLKKMKKSSGEIVYCGQVFEKSPLRV KNFGIWLRYDSRSGTHNMYREYRDLTTAGAVTQCYRDMGARHRARAHSIQIMKVEEIAASKCRRPAVKQFHDSKI KFPLPHRVLRRQHKPRFTTKRPNTEF

CGGCGCTGGGGTAAGAAGCCTGCTGAGGGATGCCCAAGAAGTTCCAGGGTGAGAACACCAAGTCGGCAGCGCCC
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CGTCCAGCAAGGTCACCCGGGCCCAGATCGAGGACCACCCAGCTCCAGCCCAGCTCAGGCAGCCCCGGACA
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TCTGCACGCCCTTAGGCCAGGTCAGCTGCGAGGGTCACAGAGCGTTCCCGGGGCCCAGGGCCCCGGGCC
CATGCTCTTATCACCAGCCACCCGTCCTCCCCGCCAGAGGGTCCCCGAGTGACACCCCATCCCCTCCCATC

 $\verb|CCTGAAGGCTGTGGGACCCATGATCCTGGTTAGATTCTCCTTCTGCTTGTCCCTGGCTGTGCTGCCTCAGGCACA| \\$ TTACTTAACCTTTCTGGGCCTCTGCCACCTCATCTGTAAAATGGGCATGATGGTGAAGCCAGGTTGCCAGATAAA ATATAGGCTACTCAGCTAAATGTGAAGTTCAGATCAATATTGAATTTGGTTTTACTGTAAGTATATCCCATGCAA CATTTGGGATATACTTATACTAAAAAAAATTATTCATTGATGCTATGGTTTGAATGGTCCCCCAAAGTTCATAT GTTTGAAACTTAATCCTCAAAGCAGTCCTTTCAACCTTGTCAACCTGTCGGCGCGCCTCTGGTGCAGTGGCGGC ACTTACTGCGGCCGCCCGGCTCTTGGGAACCAAGAATGCATCTTGTCTTGTTCTTGCAGCCCAGCATGCCAGTGC TTCCTCCATGAATTTGAAAGACATATTGGCTGACCTCATACCTAAGGAGCAGGCCAGAATTAAGACCTTCAGGCA GCAACATGGCAAGAAGGTGGTGGGCCAAATCACTGTGGACATGATGTTGTGGCATGAGAGGCATGAAGGGATT GGTCTATGAAACATCAGTTCTTGATCCTGATGAGGGCATCCGTTTCTGAGGCTTTAGTATCCCTGAATGCCAGAA CCCAACAGAGGAACAGGTATCTTGGCTCTCAAAAGAGTGGGCAAAGAGGGCAGCTCTGCCTTCCCATGTGGTCAC CATGCTGGACAACTTTCCCACCAATCTACACCCCATGTCTCAGCTCAGTGCAGCTGTTACAGCCCTCAACAGTGA AAGTAACTTTGCCCAAGCATATGCACGGGGTATCAGCCGAACCCAAGTACTGGGAGTTGATTTATGAAGACTCTG TGGATCTAATCACAAAGCTACCTTGTGTCGCAGCAAAGATCTACCGAAATCTCTATGGAGAAGGCAGTGGTATTG GGGCCATTGACTCTAACCTGGACTGGTCTCACAGTTTCACCAACATGTTAGGCTATACTGATCATCAGTTCCCTG AGCTCATGCACCTGTACCTCACTATCCACAGTGACCATGAGGGCGGCAATGTAAGTGCCCATACCAGCCACTTGG TATGAGACTACATCTGGAACACTCAACTCAGGACGGGCTGTTCCAGGCTATGGCCATGCAGTACTAAGGAAGA CTCAGCTATGCAAGATTGTGCCCAATGTCCTCTTAGAGCAGGGTAAGGCCAAGAATCCTTGGCCCAATGTAGATG CTCACAGTGGGGTGCTCCAGTATTATGGCATGATGGAGATGAATTACTACACAGTCCTGTTTGGGGTGTCAC GAGCATTGGGTGTACTGGCACAGCTCATCTGGAGCCGAGCCTTAGGCTTCCCTCTAGAAAGGCCCAAGTCCATGA GCACAGAGGGTCTGATGAAGTTTGTGGACTCTAAGTCAGGGTAAAACTGGAGACTGGGGGAAAGTGACTACCAGA AAGTGAGGAAGCCTAAATAAAAAGTATACTTTTGTTTCAGGGGGCCTTTAAAGACTTAAGATTAAATTATATCTG AGGCACTGATAATATGTTTGAGGTTAAAATATAAATTAAGACTTTAAAAGATGAAAAATGGTCCCTTCTTCCCTA ATCAGCTCCTTTCCCCTGCCTGGTATGAGTTGCCCATCACAGGCATGGTCCTGGAGGATGACCAGGACTAATGCA TGTGGTATGAGTAGGTTTGGCCCCCTCACTATCTCTAGAGTGAGAATCTGGCTCCTGTTTCCATGGCTCAAAGCC GGTTGCAGAGAATCTGCAGTCACTTCGGAGCTTTAGCTTCTTCTCTGCCAAGCCCTCAATAAGCCAGCAAACCAG GACTCTGCCCCTTCTGTTTCCATAGGAATCATGTTGGATAGTCAGCTGTACCAAGCCCCTTGGCCTTCCCATGCA CACAAACACCTCCTAGCAAGACCTGTTGGTTAGCTGGACATGCTTTGGCAATTTTTTTATACTGCCAAGTGACCA CTGGGAGTGTTCTGTTTCCCATTACTTTAATACTCACCCCCTCCCAGACTTTCTACACCTGTTTCACCTCAGGC TGAGGATGTTCTGGACCTCCCCCTCTTAGTCCCTACTAGAGACCTCTCAACAGATCTGTGGGCCCAGTCATTGGG TTTTATCAGTGCTTAATGTGAACTAAGTTTTTTACTTCCAACAGAATACAAGCCACTACCTTCTGACCTCCCCAC CCCCCACCAACCCCCAGCTTTTAATATGCTGTGGGGCATAGAACAGGGACTCCGGAATGACCAGCATGATATTTT CAGAGTCTTGTCCCTGGGGTATTAGCACCTCTTTTTGAACAGAGAATTGATTCAAGATTGGACATGGTCTCCTCT TGCACAGGTTTTCAGCAACTCAGAATGCTCTACTTCTTTTTCTTTGAGAAAGGATTGAGATACGCTCCTGCTGTG CCCCCATCTTTCCTCCAAACTCCTGCCTGTGTTTGTGTGGGATACCCAGTCCCAGAACCACACTGTTGAGTTGGAC GTTTTAATTAAC

5792/6881 FIGURE 5338A

TGGGCACTGAGCACATTCGGTTATTTCCAGAAACGCTCCGCGGTCTTGGGGATCAGCCTCAGTTGTGCCAGTGCG GCCGTAGAGAGTGTTCGGCCATTTCCGAAAGCGCTCGGGCGTCTCTAAGCCCCAGCCGAGCCCAGTCTCGGATCCC TCGCCGACCCGATTGCACTCGGCTACCTCTGGAAACGCTCGGCTGTCTCGGGGGCACCCTCTAGTCCACCAGTCC CGCGGGATTACGTTCGGCTACTTCCGGAAACACTCGGGTGCCCCCTTACCTCAGGCTCCGCCTCGGCCTCGGTTC GCTGCGGCGGCGGTGGCGGCCGACCAGGTCGGCGTCCTCAGCTGGCCGAGCATGGTGGCAGCCTGCACCCTTG GCTCCCTTGTCTGGTGCAGCCAGCAGAGCCGCCAGCCTTGGGCCCCATGGCCCTCCGTGTGAGGGCCTGAGCGG CCAGCTGACGAATGGTGGACCCAGTGACGAGTGGCCCTTGTAAGGGTCATGGAATAATTTGAAGCGAGGCATGAG CGGCCCCTGTGGTCGCCTGTGACTGCTGGAGATAGAGGTCCCAGCCCCAAGCCAACCCAGCGGACCCTCCCAG CCATGGCGGCCCTGAGGGCTTCCAGTACCGCGCTCTGTACCCGTTCCGCCGGGAGCGGCCGGAGGACCTGGAGC TGCTGCCCGGCGACGTGCTGGTAGTGAGCCGGGCGCCTTGCAGGCGTGGCCGAGGGTGGCGAGCGCT GCCCACAGAGCGTGGGCTGGATGCCCGGCCTCAACGAGCGCACACGGCAGCGAGGTGACTTCCCTGGCACCTATG CCCGTGATGGGGCCCCTGAGCCAGGCCTCACACTCCCCGACTTGCCCGAGCAGTTCTCCCCACCTGATGTGGCTC TGCCCGCACCGCGTACAGACTGGTCCCTGAGCGACGTGGATCAGTGGGACACGGCAGCCCTGGCTGACGGCATTA AGAGCTTCCTGCTGGCACTGCCCGCGCCGCTCGTGACCCCCGAGGCCTCGGCCGAGGCCGCGGGCCCTGCGGG TGCTCCAGCACCTGGGCCGCGCGCGCCCCGGCCCTGGGTCCGGGCCCTGGGCCCCACCT GCACCTTCCTAGTCCGAGATGCTTCTAGCAAGATCCAGGGCGAGTACACGCTGACCCTCAGGAAAGGCCGGGAACA ATAAGCTGATCAAGGTCTTCCACCGAGATGGGCACTATGGCTTCTCAGAGCCACTCACCTTCTGCTCCGTTGTGG ACCTCATCAATCACTACCGCCACGAGTCTCTGGCCCAGTACAATGCCAAGCTGGACACACGGCTCCTCTACCCTG TGTCCAAATACCAGCAGGACCAGATTGTCAAGGAGGACAGCGTGGAGGCAGTGGGCCCCAGCTTAAGGTCTATC ACCAGCAGTACCAGGACAAGAGCCGCGAGTATGACCAGCTTTATGAAGAGTACACACGGACCTCCCAGGAGCTGC AGATGAAGCGTACTGCAATTGAGGCCTTCAATGAGACTATCAAGATCTTTGAAGAGCAGGGCCAGACTCAAGAGA AATGCAGCAAGGAATACCTGGAGCGCTTCCGGCGTGAGGGCAACGAGAAAGAGATGCAAAGGATCCTGCTGAACT CCGAGCGGCTCAAGTCCCGCATTGCCGAGATCCATGAGAGCCGCACGAAGCTGGAGCAGCAGCTGCGGGCCCAGG CCTCGGACAACAGAGAGATCGACAAGCGCATGAACAGCCTCAAGCCGGACCTCATGCAGCTGCGCAAGATCCGAG ACCAGTACCTCGTGTGGCTCACCCAGAAAGGCGCCCGGCAGAAGAAATCAACGAGTGGCTGGGGATTAAAAATG AGACTGAGGACCAGTACGCACTCATGGAGGACGAGGACGATCTCCCGCACCACGAGGAACGCACTTGGTACGTGG GCAAGATCAACCGCACGCAGGCAGAGGAGATGCTGAGTGGCAAGCGGGATGGCACCTTCCTCATCCGCGAGAGCA GCCAGCGGGGCTGCTACGCCTGCTCCGTGGTAGTGGACGGCGACACCAAGCACTGCGTCATCTACCGCACGGCCA CCGGCTTCGGCTTCGCGGAGCCCTACAACCTGTACGGGTCGCTGAAGGAGCTGGTGCTGCACTACCAGCACGCCT CTGCCGCCGCTGAGCACCGAGGACCCGCCCCAAGCAGAGCCGCCCCTGGGCCCGTCTGCGCCGGAGGCTGCGGC GGCGGGAGCCACGACCAGACCAGCCACATCCAGGGGTCCTCATTTCTCCGGCTCTGGCTCTTGTTTGGGGTTCT CCCCTGTCTCTCCCATGTTGGGGGTCCTAACTCCCCCACCCCATATCTACGTGTCCTCCGGGCATTGCCCTCTC CATGGCTCTGGTCACCCTGACCCTCTGCCCTGCCCACCGCAGGTCCCCGGGGTCCCGGAAGCCCCTTCTGGCTG CACCTGCCATGTTTACAGAGGGCCCCTGGGCTGCGCGCCCCAGCCTGGGCACCCTGATTTTTAAGCCATAGACC TGGGGTCAGGGCAGGAAGGAACTTCACTCTGCTGCTTCCGAGAACCTCGGCCGTGACATTCGGGGCCGGGCGGAA

5793/6881 FIGURE 5338B

MTLSPLLLFLPPLLLLLDVPTAAVQASPLQALDFFGNGPPVNYKTGNLYLRGPLKKSNAPLVNVTLYYEALCGGC RAFLIRELFPTWLLVMEILNVTLVPYGNAQEQNVSGRWEFKCQHGEEECKFNKVEACVLDELDMELAFLTIVCME EFEDMERSLPLCLQLYAPGLSPDTIMECAMGDRGMQLMHANAQRTDALQPPHEYVPWVTVNGKPLEDQTQLLTLV CQLYQGKKPDVCPSSTSSLRSVCFK

 $\label{thm:mcpegcont} $$ MCPEGCOYTGRGHTLRTPQLGEAGGLHQPPGLCPRRSLRLECASRPNPTLCLLRLPSLRPGPDPSGAGRVRVWLL $$ APPCPQSVSGEMAQYLEKPRVCGRMQAKPTHHDTALRSGITSLTTRGAAAEIKVKMQSPGPSPSVAPTSSATFIA $$ LGTFRIKRFLDKKQKQNRPIPQWIWMKTGNKIRYNSKRTLEKNQAGSIRNCT$

GCAACCTGCACAGCCATGCCCGGGCAAGAACTCAGGACGGTGAATGGCTCTCAGATGCTCCTGGTGTTGCTGGTG CTCTCGTGGCTGCCGCATGGGGGGCGCCCTGTCTCTGGCCGAGGCGAGCCGCGCAAGTTTCCCGGGACCCTCAGAG TTGCACTCCGAAGACTCCAGATTCCGAGAGTTGCGGAAACGCTACGAGGACCTGCTAACCAGGCTGCGGGCCAAC CAGAGCTGGGAAGATTCGAACACCGACCTCGTCCCGGCCCCTGCAGTCCGGATACTCACGCCAGAAGTGCGGCTG GGATCCGGCGGCCACCTGCACCTGCGTATCTCTCGGGCCGCCCTTCCCGAGGGCTCCCCGAGGCCTCCCGCCTT CACCGGGCTCTGTTCCGGCTGTCCCCGACGGCGTCAAGGTCGTGGGACGTGACACGACCGCTGCGGCGTCAGCTC AGCCTTGCAAGACCCCAGGCGCCGCGCTGCACCTGCGACTGTCGCCGCCGCCGTCGCAGTCGGACCAACTGCTG GCAGAATCTTCGTCCGCACGGCCCCAGCTGGAGTTGCACTTGCGGCCGCAAGCCGCCAGGGGGCGCCGCAGAGCC GAAGACCTGGGCTGGGCCGATTGGGTGCTGTCGCCACGGGAGGTGCAAGTGACCATGTGCATCGGCGCGTGCCCG GCGCCCTGCTGCCGCCCGCCAGCTACAATCCCATGGTGCTCATTCAAAAGACCGACACCGGGGTGTCGCTCCAG ACCTATGATGACTTGTTAGCCAAAGACTGCCACTGCATATGAGCAGTCCTGGTCCTTCCACTGTGCACCTGCGCG GAGGACGCGACCTCAGTTGTCCTGCCCTGTGGAATGGGCTCAAGGTTCCTGAGACACCCGATTCCTGCCCAAACA GCTGTATTTATAAAGTCTGTTATTTATTAATTTATTGGGGTGACCTTCTTGGGGACTCGGGGGCTGGTCTG ATGGAACTGTGTATTTATTTAAAACTCTGGTGATAAAAATAAAGCTGTCTGAACTGTT

MPGQELRTVNGSQMLLVLLVLSWLPHGGALSLAEASRASFPGPSELHSEDSRFRELRKRYEDLLTRLRANQSWED SNTDLVPAPAVRILTPEVRLGSGGHLHLRISRAALPEGLPEASRLHRALFRLSPTASRSWDVTRPLRRQLSLARP QAPALHLRLSPPPSQSDQLLAESSSARPQLELHLRPQAARGRRRARARNGDHCPLGPGRCCRLHTVRASLEDLGW ADWVLSPREVQVTMCIGACPSQFRAANMHAQIKTSLHRLKPDTVPAPCCVPASYNPMVLIQKTDTGVSLQTYDDL LAKDCHCI

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ACAACCCCGGCGGAGGAGGCTGAGCAGCCTGGGGCCCTGGCCCGAGAGTTCCTTGCTGCCATGGAGCCCGAGCC CGCCCCAGCCCCGGCCCCAGAAGAGTGGCTGGACATTCTGGGGAACGGGCTGTTGAGGAAGAAGACGCTGGTCCC AGGGCCGCCAGGTTCGAGCCGCCCGGTCAAGGGCCAGGTGGTCACCGTACATCTGCAGACGTCGCTGGAGAATGG CACACGGGTGCAGGAGGCCGGAGCTGGTGTTCACTCTGGGTGACTGTGACGTCATCCAGGCCCTGGATCTCAG TGTCCCACTCATGGACGTGGGGGAGACGGCCATGGTCACTGCTGACTCCAAGTACTGCTACGGCCCCCAAGGCAG CAGGAGCCCATACATCCCCCCGCACGCGGCCCTGTGCCTGGAGGTGACCCTGAAGACGGCTGTGGACGGCCTGA CCTGGAGATGCTCACGGGGCAGGAGCGCGTGGCCCTGGCCAACCGGAAGCGGGAGTGCGGCAACGCCCACTACCA GCGGGCGGACTTCGTCCTGGCCGCCAACTCCTACGACCTCGCCATCAAGGCTATCACCTCCAGCGCCAAAGTGGA CATGACGTTCGAGGAGGAGGCACAGCTCCTGCAGTTGAAGGTGAAGTGTCTGAACAACCTGGCGGCCTCGCAGCT TCTCTTCCGCAAGGGCAAGGTGCTGGCCCAGCAGGGGGAGTACAGTGAGGCCATCCCGATCCTGAGGGCAGCCCT GAAGCTGGAACCTTCCAACAAGACGATCCACGCAGAGCTCTCAAAGCTGGTGAAGAAGCATGCGGCGCAGCGGAG CACGGAGACCGCCTTGTACCGGAAAATGCTGGGCAACCCCAGCCGGCTGCCTGAAGTGCCCTGGCAAGGGTGC $\tt CTGGTCCATCCCATGGAAGTGGCTGTTTGGGGCGACTGCTGTTGCCTTGGGGGGGTGTGGCACTCTCTGTGGTCAT$ TCCCCCAGGCTCCCTGTCCACTGCCCTCCTGGTCTGGCCCCCTCCTCCGGGTTAGGGGAGCAAGGATTGGGGGT ${\tt AGACCCAGTTTTCCCCCACCCTCCTTACCCCGCTGGGCTAGGTCTCCGCCAGGGCTGGCCTCAGTTTCTCCTCAA}$ CAGGCCTGGGGGCAGCCCTTCCCCTGCCTAGTCCCCGCCTGAGTGCCAGCCCCCACCCCGCCTGCCCCCCTG

 $\label{thm:condition} MGQPPAEEAEQPGALAREFLAAMEPEPAPAPAPEEWLDILGNGLLRKKTLVPGPPGSSRPVKGQVVTVHLQTSLE\\ NGTRVQEEPELVFTLGDCDVIQALDLSVPLMDVGETAMVTADSKYCYGPQGSRSPYIPPHAALCLEVTLKTAVDG\\ PDLEMLTGQERVALANRKRECGNAHYQRADFVLAANSYDLAIKAITSSAKVDMTFEEEAQLLQLKVKCLNNLAAS\\ QLKLDHYRAALRSCSLVLEHQPDNIKALFRKGKVLAQQGEYSEAIPILRAALKLEPSNKTIHAELSKLVKKHAAQ\\ RSTETALYRKMLGNPSRLPAKCPGKGAWSIPWKWLFGATAVALGGVALSVVIAARN\\ \end{tabular}$

 $\tt CTTGGCGCAGGCTGGAAGAGCTGGTGAGAAGACAGCGAA{\color{red} ATC} GCGCCTCCGGCCCCGGCCCCGGCCTCCGGC}$ GGCTCCGGGGAGGTAGACGAGCTGTTCGACGTAAAGAACGCCTTCTACATCGGCAGCTACCAGCAGTGCATAAAC GAGGCGCAGCGGGTGAAGCTATCAAGCCCAGAGAGAGACGTGGAGAGGGACGTCTTCCTGTATAGAGCGTACCTG GCGCAGAGGAAGTTCGGTGTGGTCCTGGATGAGATCAAGCCCTCCTCGGCCCCTGAGCTCCAGGCCGTGCGCATG TTTGCTGACTACCTCGCCCACGAGAGTCGGAGGGACAGCATCGTGGCCGAGCTGGACCGAGAGATGAGCAGGAGC $\tt CTGCGTGCGCTGCACCAGGGGGGACAGCCTGGAGTGCACAGCCATGACAGTGCAGATCCTGCTGAAGCTGGACCGC$ CTGGACCTCGCCCGGAAGGAGCTGAAGAGAATGCAGGACCTGGACGAGGATGCCACCCTCACCCAGCTCGCCACT GCCTGGGTCAGCCTGGCCACGGGTGGTGAGAAGCTGCAGGATGCCTACTACATCTTCCAGGAGATGGCTGACAAG TGCTCGCCCACCCTGCTGCTCAATGGGCAGGCCGGCCTGCCACATGGCCCAGGGCCGCTGGGAGGCCGCTGAG GGCCTGCTGCAGGAGGCGCTAGACAAGGATAGTGGCTACCCAGAGACGCTGGTCAACCTCATCGTCCTGTCCCAG CACCTGGGCAAGCCCCCTGAGGTGACAAACCGATACCTGTCCCAGCTGAAGGATGCCCACAGGTCCCATCCCTTC ATCAAGGAGTACCAGGCCAAGGAGAACGACTTTGACAGGCTGGTGCTACAGTACGCTCCCAGCGCC<u>TGA</u>GGCTGG CCCAGAGCTGTCAGGACCATGAAGCCAGGACAGAGGCCAGGAGCCCTGCAGCCCTCCCCACCCGGCATCCA AAAAA

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5810/6881 FIGURE 5355

CACGAGGTGGCCTCGTTGGCTTTACCTTGGTTCGCGGTCGTCCTTGGTTATCGTGAGCGTCCGCGAGTCTCTGGG AGGCCAAGCCTAGGGGCGCCACAGCGCCTGCGCGCGTACGGCGGCCGGAAGGGGGCTAGAGGCGGCTCCCTGGGTG ACAACCGCGCGCCCCACCTTTCCCCACGTGGCCGCGAAGACCGGCTCAGGAGCATCTATCGGCTGCACGCCAACA TCAACACAGGCGAAGATGGTCTCCAAGCGCATTGCCCAGGAGACCTTTGATGCAGCTGTGCGCGAGAACATCGAG CAGTTTGCGATGGGGCCAGAGGAGGCAGTGAAAGAGGCCGTGGAGCAGTTTGAATCGCAAGGGGTTGATCTGAGC AACATTGTAAAGACGGCACCTAAAGTCTCTGCAGACGGATCCCAGGAGCCCACACATGACATCCTGCAGATGCTC AGTGACCTCCAGGAGTCTGTGGCCAGCTCTCGCCCCCAGGAGGTGTCAGCATACCTCACCCGCTTCTGCGACCAG TGCAAACAGGACAAGGCCTGCCGCTTCCTCGCGGCCCAGAAGGGGGCCTACCCCATCATCTTCACTGCAGAAG GACCTCCTGGATGCCCAGGGCCTGCAGCTCCTAGTGGCCACGCTGACCCAGAATGCTGATGAGGCTGACCTGACC TGCTCTGGGATCCGCTGTGTGCGTCACGCTTGCCTGAAACATGAACAGAATCGGCAAGACCTGGTGAAAGCTGGC GTGCTGCCTCTGCTGACTGCCATCACCCATCATGGCCACCACACTGACGTGGTCAGGGAAGCCTGCTGGGCC CTGCGTGTCATGACCTTCGATGACGACATCCGTGTGCCCTTTGGCCATGCCCACAACCATGCCAAGATGATTGTG CAGGAGAACAAAGGCTTGAAGGTGCTCATCGAAGCCACCAAAGCGTTCCTGGATAACCCTGGCATCCTGAGCGAG CTCTGTGGAACCCTGTCCCGCCTGGCCATTCGCAACGAGTTCTGCCAGGAGGTCGTCGACCTCGGGGGCCTGAGC ATTCTGGTGTCCCTGCTAGCCGACTGCAATGACCACCAGATGAGGGACCAGAGCGGCGTTCAGGAGCTCGTGAAG CAAGTGCTGAGCACCCTGCGAGCCATCGCAGGCAACGACGTGAAAGATGCTATTGTCCGTGCTGGTGGGACG GAGTCCATCGTGGCTGCTATGACCCAGCATCTGACCAGCCCCCAGGTGTGTGAGCAGAGCTGCGCGCCCTGTGC TTCCTGGCCCTGCGTAAGCCCGACAACAGCCGCATCATCGTGGAGGGTGGCGGGGCTGTGGCAGCACTGCAGGCC ATGAAGGCACACCCGCAGAAGGCCGGCGTGCAGAAACAGGCTTGCATGCTGATCCGAAACCTGGTGGCCCACGGC CAGGCCTTCTCGAAGCCCATCCTGGACCTGGGGGCTGAGGCACTCATCATGCAGGCCCGATCTGCCCACCGTGAC TGTGAGGACGTGGCCAAGGCCGCCCTGCGGGACCTGGGTTGTCATGTCGAGCTCCGAGAGCTGTGGACAGGCCAG AGGGGCAACCTGGCGCCA<u>TGA</u>CCCCAGGCCCAGTCTGGGCCGTGACTCTGGGTGAGTCGTGTGACTCAGGAATGG GGGTAGATCCATGTCCTCCACTGTCCCCCATTAGTTCTGTCCCCTTCACAATGAGAAGTGTTTTCTGGCAGGCCC TAGGTAAAGGGTCGGGGGAGGGGGGGGCCTTGTAGGGAGGCCTCTACACAGAAGAAAGCAGCCCCCATGTCCCAG CCACTTCTGGGTCCCAGCCAGCAGGATGTTACTGTCCTGCTCCTTCCCCCAGCCCCACGCCCTACCAGAGG GGGCAAAGGGCACGTCCCATCACTCCCCTGTCTGAAATGTGGCAGCCACTGTGGGCCAGGCTCAGGGCAGG GCAGGCGATTCCAGTGGGGTTGGGCCCCCTGGCGCCTGCTGCTTACTGCAGTTTCATGCAGGCCTCTGCTCCTTG TCTTTCTTACCTGTAAAATGGGTCTCAGATGCTCCGCCCTGCTTGGCCCCAGCTTGTCTCTGTGTCTCTGGGTCCTGGG

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 $\label{topaedliqtqqtpaselgdpedpgeeaadgsdtvvlslfpctpepvnpepdasvsspqagsslkhsttltn \\ RQRGNEVSALPATLDSLSIHQLAAQGELDQLKEHLRKGDNLVNKPDERGFTPLIWASAFGEIETVRFLLEWGADP \\ HILAKERESALSLASTGGYTDIVGLLLERDVDINIYDWNGGTPLLYAVRGNHVKCVEALLARGADLTTEADSGYT \\ PMDLAVALGYRKVQQVIENHILKLFQSNLVPADPE$

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5840/6881 FIGURE 5385

CTCTGACAAAAGCATCTCAGTGATTGACTTTTACTCGGGCGAGTGCATTGCCAAGATGTTTGGCCATTCAGAAAT TATTACCAGCATGAAGTTCACCTATGACTGTCATCACTTGATCACAGTATCTGGAGACAGCTGCGTGTTCATCTG GCACCTGGGCCCGGAGATCACCAACTGCATGAAGCAGCACTTGCTGGAGATTGACCACCGGCAGCAGCAGCAGCA CACAAATGACAAGAAGCGGAGTGGCCACCCCAGGCAGGATACGTATGTGTCCACACCTAGTGAGATTCACTCCCT GAGCCCTGGAGAGCAAACAGAGGATGATCTGGAGGAAGAGTGTGAGCCAGAAGAGATGCTGAAGACACCATCCAA AGATAGCTTGGATCCAGATCCTCGTTGCCTGCTAACCAACGGCAAGCTGCCACTGTGGGCAAAGCGGCTGCTAGG GGACGATGATGTGGCAGATGGCTTGGCCTTCCACGCCAAGCGCAGCTACCAGCCCCACGGCCGCTGGGCAGAGCG GGCCGGCCAAGAGCCCCTCAAGACCATCCTGGATGCCCAGGACCTGGATTGCTACTTTACCCCC<u>ATG</u>AAGCCCGA CCAGGAAGCTGGCCGCGGGCACCCCTCCTTCCTGCCCCAGCAGAAGGAATCATCTGAGGCCAGTGAGCTCATCCT TGGAGACCAGCAGGGCGACTCCTACCTCAGGGTGTCCTCCGACAGCCCAAAGGACCAGAGCCCGCCTGAGGACTC GGGGGAGTCAGAGGCCGACCTGGAGTGCAGCTTCGCAGCCATCCACTCCCCAGCTCCGCCTCCTGACCCTGCCCC TCGGTTTGCCACGTCGCTGCCCCATTTCCCAGGATGCGCAGGTCCCACAGAAGATGAGCTGTCCCTGCCCGAGGG ACCCAGCGTCCCCAGCAGCTCCCTACCCCAGACTCCGGAGCAGGAGAAGTTCCTCCGCCACCACTTTGAGACACT GACTGAGTCCCCTGCAGAGCTCTGGGAGACGTGGAGGCCTCTGAAGCCACTTCTTCAACCCACGCCT CAGCTCCCGTGCCAGGATATCACGCAGCATCTCCCTCGGTGACAGTGAGGGCCCTATCGTGGCCACACTGGCCCA GCCCCTCCGTAGGCCATCGTCCGTTGGGGAGCTGGCCTCCTTGGGCCAGGAGCTTCAGGCCATCACCACCGCGAC AACACCCAGTTTGGACAGTGAGGGCCAAGAGCCTGCCCTGCGTTCCTGGGGCCAACCACGAGGCCCGGGCCAACCT GAGACTGACCCTGTCAAGTGCCTGTGATGGGCTCCTGCAGCCCCCGTGGATACCCAGCCTGGCGTCACCGTCCC TGCAGTGAGCTTCCCAGCCCCTAGCCCTGTGGAAGAGAGCGCCCTGAGGCTCCACGGCTCTGCCTTTCGCCCAAG TCTCCCAGCTCCTGAGTCCCCTGGCCTTCCTGCCCACCCCAGCTAACCCCCAGCTTCCAGAGGCCCGGCCTGGCAT CCCTGGCGGCACTGCCTCCTGGAGCCCACCTCCGGTGCACTTGGTCTGTTACAGGGCAGCCCTGCCCGCTG GAGTGAGCCCTGGGTGCCGGTTGAAGCCCTGCCCCCATCTCCCCTTGAGCTGAGCAGGGTGGGGAACATCTTGCA CAGGCTGCAGACCACCTTCCAAGAAGCCCTCGACCTTTACCGTGTGTTTGGTCTCCAGTGGCCAGGTGGACACCGG CAGCCCAGACCTGCAGGCCCTGCTGGAACACTACTCGGAGCTGCTGGTGCAGGCCGTGCGGAGGAAGGCACGGGG **AGCTTTG**

MKPESLENSILDSLEPQSLASLLSESESPQEAGRGHPSFLPQQKESSEASELILYSLEAEVTVTGTDSQYCRKEV EAGPGDQQGDSYLRVSSDSPKDQSPPEDSGESEADLECSFAAIHSPAPPPDPAPRFATSLPHFPGCAGPTEDELS LPEGPSVPSSSLPQTPEQEKFLRHHFETLTESPCRALGDVEASEAEDHFFNPRLSISTQFLSSLQKASRFTHTFP PRATQCLVKSPEVKLMDRGGSQPRAGTGYASPDRTHVLAAGKAEETLEAWRPPPPCLTSLASCVPASSVLPTDRN LPTPTSAPTPGLAQGVHAPSTCSYMEATASSRARISRSISLGDSEGPIVATLAQPLRRPSSVGELASLGQELQAI TTATTPSLDSEGQEPALRSWGNHEARANLRLTLSSACDGLLQPPVDTQPGVTVPAVSFPAPSPVEESALRLHGSA FRPSLPAPESPGLPAHPSNPQLPEARPGIPGGTASLLEPTSGALGLLQGSPARWSEPWVPVEALPPSPLELSRVG NILHRLQTTFQEALDLYRVLVSSGQVDTGQQQARTELVSTFLWIHSQLEAECLVGTSVAPAQALPSPGPPSPPTL YPLASPDLQALLEHYSELLVQAVRRKARGH

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5842/6881 FIGURE **5387**

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MAKARNQLDAVLQCLLEKSHMDRERLDEEAGKTPSDTHNKDCSIAATGKRPSARFPHQRRKKRREMDDGLAEGGP QRSNTYVIKLFDRSVDLAQFSENTPLYPICRAWMRNSPSVRERECSPSSPLPPLPEDEEGSEVTNSKSRDVYKLP PPTPPGPPGDACRSRIPSPLQPEMQGTPDDEPSEPEPSPSTLIYRNMQRWKRIRQRWKEASHRNQLRYSESMKIL REMYERQ

GGCACGAGGGGGGAGAGTAGACAGCAGAACCAGCGGCGGCGGCTAAGCAGAGACTGTAGTAGCGGCGACAGCGAC GACGGCAGCGATGGCCGGGGCCAGCCCCGGGACTCCCGGGTGCAGGAGGACCCGGGGTCCTGG AGTTCTGGGGGCTCCAGTACCTGGAATCCCAACTGCTGTGCCTGCGGTGCCCACTGTCCCCACGGTCCCCACAGT AGAAGCGATGCAGGTCCCAGCGGCTCCTGTGATCCGCCCAATTATCGCGACCAACACATACCAGCAGGTCCAGCA TGTTGGCTTTGGCCCTGGTGATCGGAGTCACCTGGACAGCCCAGAGGCTCGAGAAGCCATGTTCCTGCGGCGGGC AGCTGTGGCCCCCCAGAGGGCCCCTATCCTGCGTCCAGCCTTCGTCCCCCACGTGCTACAGAGAGCAGATTCCGC TCTCTCCTCTGCAGCAGCCGGCCCCGCCCTATGGCCCTACGGCCCCTCACCAGGCCCTCGTGGGCCCCCCTCT .GCCTGGGCCCCCTGGACCACCATGATGCTGCCACCAATGGCTCGGGCTCCAGGGCCCCGCTGGGCTCCATGGC TGCACTGAGGCCCCCTCTGGAAGAGCCAGCACCCCGAGAGCTGGGCCTAGGCCTGGGGTTGGGCCTGAAAGA GAAGGAAGAGGCAGTGGTGGCGGCGGCGGCTGGGCTGGAGGAGGCTAGCGCGGCTGTGGCCGTGGGGGCAGGAGG CCTGCCCTCCCGTTGGAGGTCGTCCGCGGCCTCCTGCCCCCGCTGCGCATTCCTGAACTCCTGTCCCTGCGTCC ${\tt TCGGCCCGGCCCCTCGGCCAGAGCCACCCCCAGGCCTCATGGCTCTTGAGGTCCCAGAGCCCCTGGGTGAAGA}$ CAAGAAGAAGGGGAAGCCAGAGAAATTGAAACGGTGCATTCGCACAGCGGCAGGGAGCAGCTGGGAAGCCCCAG CCTGCTGGAGTGGGATGCAGATGACTTCCGGATCTTCTGTGGGGATCTGGGCAATGAGGTGAACGATGACATCTT GGCACGCGCCTTCAGCCGCTTCCCATCCTTCAAGGCCAAGGTGATCCGTGACAAGCGCACAGGCAAGACCAA ${\tt GGGCTACGGCTTCATCATGGACCCCAGCGACTACGTGCGCGCCATGCGTGAGATGAATGGGAAGTATGT}$ GGGCTCGCGCCCCATCAAGCTTCGCAAGAGCATGTGGAAGGACCGGAATCTGGACGTGGTCCGCAAGAAGCAGAA CCCTCAGTTCTCTTTGGAAAACCCCCAGCTGTCCACCCATCCCCTGCCCCAAAACCAGTTTCAATAAATTTACGT TCATTTCCAAAAAAAAAAAAAAAAAAAAA

MAGAGPAPGLPGAGGPVVPGPGAGIPGKSGEERLKEMEAEMALFEQEVLGAPVPGIPTAVPAVPTVPTVEAM QVPAAPVIRPIIATNTYQQVQQTLEARAAAAATVVPPMVGGPPFVGPVGFGPGDRSHLDSPEAREAMFLRRAAVA PQRAPILRPAFVPHVLQRADSALSSAAAGPRPMALRPPHQALVGPPLPGPPGPPMMLPPMARAPGPPLGSMAALR PPLEEPAAPRELGLGLGLKEKEEAVVAAAAGLEEASAAVAVGAGGAPAGPAVIGPSLPLALAMPLPEPEPLPL PLEVVRGLLPPLRIPELLSLRPRPRPPRPEPPPGLMALEVPEPLGEDKKKGKPEKLKRCIRTAAGSSWEDPSLLE WDADDFRIFCGDLGNEVNDDILARAFSRFPSFLKAKVIRDKRTGKTKGYGFVSFKDPSDYVRAMREMNGKYVGSR PIKLRKSMWKDRNLDVVRKKQKEKKKLGLR

5846/6881 FIGURE **5391A**

CGGTGTCGCCGCCGCGCGCTGTCATGGAGCTAGCGCAGGAAGCGCGGGAACTGGGTTGCTGGGCGGTCGAAGAG ATGGGGGTGCCCGTGGCGGCCCCGGAATCGACGCTGCGCAGGCTGTCTCTGGGCCAGGGGGCTGACATC TGGGCCTACATCTTGCAGCATGTGCACAGTCAGAGGACTGTCAAGAAGATCCGGGGAAACCTACTCTGGTATGGC CACCAGGACAGTCCACAGGTCCGTCGGAAGTTAGAGCTGGAAGCTGCTGTGACCCGCCTGCGGGCAGAAATCCAG GAACTCGACCAGAGCCTGGAGCTGATGGAGCGAGACACTGAGGCTCAGGACACGGCCATGGAGCAGGCACGTCAG CACACTCAAGACACCCAGCGTCGAGCTCTCCTCCTCCGGGCCCAAGCTGGGGCCCATGCGAAGACAGCAGCATACG CTCCGAGATCCCATGCAGCGGCTGCAGAATCAACTGAGGCGCCTGCAGGACATGGAGAGAAAGCCAAAGTAGAT GTGACCTTTGGATCCCTCACGTCGGCAGCTCTGGGCCCTGGAGCCCGTGGTCCTGCGTGATGTCCGAACAGCCTGC ACCCTCCGGGCCCAGTTCCTGCAGAACCTCCTGCTTCCCCAGGCCAAGAGGGGCAGCCTCCCAACCCCTCATGAT GACCACTTTGGCACTTCGTACCAGCAGTGGCTGAGCTCAGTGGAGACGCTGCTGACAAACCACCCCCCAGGCCAC GTCCTGGCTGCCTTGGAGCACCTGGCTGCAGAGCGGGAGGCAGAGATTCGGTCCCTGTGCAGTGGGGATGGGCTT CTCATCCAGGAGGGCTGGCGGACTGTGGGTGTGCTGGTCTCCCAGCGGAGCACCCTCCTGAAGGAGCGGCAAGTC TTGACCCAGCGCCTCCAGGGCCTGGTGGAGGAGGTGGAGAGACGCGTCCTGGGATCCAGTGAGAGGCAGGTGCTG ATACTGGGGCTTCGGCGCTGTTGCCTGTGGACGGAGCTCAAGGCCCTGCACGATCAGAGCCAGGAGCTGCAGGAT GCAGCTGGGCATCGGCAGCTCCTGCTGAGGGAGCTACAGGCCAAACAGCAGCGGATCCTGCACTGGCGCCAGCTG GTGGAGGAGACCCAGGAACAGGTCCGCCTGCTCATCAAGGGAAACTCGGCCAGCAAGACCCGCCTGTGCCGGAGC CCGGGGGAGGTGCTAGCTCTGGTCCAGCGAAAGGTGGTCCCTACATTTGAGGCAGTGGCACCACAGAGCCGGGAG TTCATAGCGCTGAGCCACAAGCTGGGGCTGCCTCCAGGGAAGGCCTCGGAGCTGCTCCTGCCGGCGGCTGCCTCT CTTCGCCAGGACCTTCTGCTCCTGCAGGACCAGCGGAGCCTCTGGTGCTGGGATCTACTCCACATGAAGACCAGC CTGCCGCCAGGCCTTCCCACCCAGGAGCTGCTGCAGATCCAGGCATCCCAGGAAAAACAGCAGAAAGAGAACCTG GGGCAGGCTCTGAAGAGGCTGGAGAAGCTACTGAAACAGGCACTGGAGCGAATCCCTGAGCTGCAGGGGATCGTG GGGGACTGGTGGGAGCAGCCAGGCCAGGCCCCTCTCTGAGGAGCTCTGCCAGGGCCTGTCCCTGCCCCAGTGG CGGCTGCGCTGGGTTCAGGCCCAGGGGGCCCTGCAGAAGCTGTGCAGCTGAAGAGAGGGTTCAAACGGAAGCCGA GAACTTGACACTGTTCACCCCAACACCTCACCTCCCCCAGGACATTTGGAAGAAAGCAGCGCCAGGATTCCTCGG CAGTCGTCCCCACCCGCACCTGCAGTCCCCTCATGTGCTGTTCTGCTGCCCCACTCAGCTCCTGGACCCTGTCCT TTCATCCCGCTAAAGCACCCCCTAAAACCCCTTCATCACTTTCATCTCAGCAAAAAGTAATTGAGCACCTCCTC TAGGCGCTGGGGAGTCCACACTGAACAAAAGAAACAGAAAACCCTGTCTTCCAGCAGTTGAGTTCTAGGGCAGGG AGACAGAGTTTACAAGATAAGGAAAATATATATGTAGTATGCTGCAAGTTAACTGCTGTGTGGGAAATCCAGCAG GGGGTGGGATGTGTGATTTGAATTGAGGGCCACACTGCCCAGGTCGTGCTCCGTCAAGGGGTGAGCAGGAGCAAC AGGGGTGGCTGAGTAAGGGCTTGCAGCTGGAGGCAACAGCACATGCAAAGGCCCTGAGCCAGGATGTGCTGCAAT AAGGGCCACTGAGGGGGACAGTGTAGGTTGGGGGTGAGGAATGTATTAAAAGATGAGATTGCCTTCTAGTTTGTA TAGTTTCTTTTTTTACATGTAAATCAGCCATTTGGAATTTATCCTAGCACATGGATCCAATTTTGTCTTATTTTA ATCAACTGAGGAGGAGACACAGAAATGTCCTAGCTGATGGGAATGTGCTGTGTCAAGAGCAGCGGCGGTGACGCA GGTGTAGAGATTTGTCAGAGCTCATGTAGTTGTAGTCTTAAGGCCTGTGCATTTCACTGCGTGGGTTACTCAATT TATAAAGCAAAGCCCTTACACTTTTGAGATGCCACCTTTTTATGCACTAAATTTCCATGTTTAATTGGGTTATAT CTGGCTTCTCCCAGACCTGCTTTGTATTTAACTCTCCATGTGTCATTCCTACAGTAGCTTAATAGAAAGGCTTG TGCCCAAGTTGGAGTGCAGTGGCATGATCTCAGCTCACTGCAACCTCCGCCTCCCAGGTTCAAGCCATTCTCATG CCTCAGCTTCCCCAGTAGCTAGGATTACAGGTACGCACCACCACCCCAGCTCATTTTTGTACTTTTAGTAGGGA GTGCTGGGATTACAGGCATGAGCCACCGCGCCTGACCACATTGCCATATCTGAAATGGCTGGATTCTCTTAGGTG CTTTTCTTTTCTTTCTTTCTTTTTTTGAGACAGAATCTGGCTGTTTCCCAGGCTGAAGTGCAGTGGCATG AACTCAGCTCACTGCAACCTCTGCCTCCTGGATTCAAACAATTCTCATGTCTCAGCCTCCTGAATAGCTGGGATT

5847/6881 FIGURE 5391B

MELAQEARELGCWAVEEMGVPVAARAPESTLRRLCLGQGADIWAYILQHVHSQRTVKKIRGNLLWYGHQDSPQVR
RKLELEAAVTRLRAEIQELDQSLELMERDTEAQDTAMEQARQHTQDTQRRALLLRAQAGAMRRQQHTLRDPMQRL
QNQLRRLQDMERKAKVDVTFGSLTSAALGLEPVVLRDVRTACTLRAQFLQNLLLPQAKRGSLPTPHDDHFGTSYQ
QWLSSVETLLTNHPPGHVLAALEHLAAEREAEIRSLCSGDGLGDTEISRPQAPDQSDSSQTLPSMVHLIQEGWRT
VGVLVSQRSTLLKERQVLTQRLQGLVEEVERRVLGSSERQVLILGLRRCCLWTELKALHDQSQELQDAAGHRQLL
LRELQAKQQRILHWRQLVEETQEQVRLLIKGNSASKTRLCRSPGEVLALVQRKVVPTFEAVAPQSRELLRCLEEE
VRHLPHILLGTLLRHRPGELKPLPTVLPSIHQLHPASPRGSSFIALSHKLGLPPGKASELLLPAAASLRQDLLLL
QDQRSLWCWDLLHMKTSLPPGLPTQELLQIQASQEKQQKENLGQALKRLEKLLKQALERIPELQGIVGDWWEQPG
QAALSEELCQGLSLPQWRLRWVQAQGALQKLCS

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5849/6881 FIGURE **5393**

MTLFHFGNCFALAYFPYFITYKCSGLSEYNAFWKCVQAGVTYLFVQLCKMLFLATFFPTWEGGIYDFIGEFMKAS VDVADLIGLNLVMSRNAGKGEYKIMVAALGWATAELIMSRCIPLWVGARGIEFDWKYIQMSIDSNISLVHYIVAS AQVWMITRYDLYHTFRPAVLLLMFLSVYKAFVMETFVHLCSLGSWAALLARAVVTGLLALSTLALYVAVVNVHS

ATGGCCGTTGCCAGCTTCCGTGCTAGTCGCATCTCAGCAGGATCCCCTCCAGATTTGGTCCTGGTGCTT
GATGGTCGAGGCCATCTCCTGGGCCGCCTGGCGGCCATCTGTGGCTAAACAGGTACTGTGGCCGGAAGGTGGTG
GTCGTACGCTGTGAAGGCATCAACATTTCTGGCAATTTCTACAGAAACAAGTGCCCCTACCACTTCCGGGCCCCC
AGCCGCATCTTCTGGCGGACCGTGCGAGGTATGCTGCCCCACAAAACCAAGCGAGGCCAGGCCGCTCTGGACCGT
CTCAAGGTGTTTGACGGCATCCCACCGCCCTACGACAAGGTGAGCTATGCCAAAACCCACAGGCAGCCGCCCTTAC
CTGTGGCGTCCATGA

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5852/6881 FIGURE **5396A**

AAAAAATAGCCAGGCGTGGTGGCACATGCCTATAATCCCAGCTACTCAGGTGGCTGAGGCAGGAGAATCGCTTGA ACCCAGGAGGCAGAGGCTGCAGTGAGGTCACCACCACTGCACTCCAGCCTGGGTGACAGAGTGAGACTCTG TCTCAAAAAACAAACAAACAAGCAAAAATCAAAAACATTGTTTCAGATCTTATTTTCCTATTGACCTAAGAGTTA TTTAATATAGACTTTTGAATTTTCAGGTAGATTTTACTTGTGTTTCTTTTAATTTTATTAATTTCCAGTTTT AGTAGAAAATGTCTATATAATTTCAACCTTTTTTTTTTGCTAACTCCTAGTTTTGTGTCTAGATTTCAGCTTTTT TTTCCTCTGGCTGTTCCTGTTGCTGGCTTGCCATCCTCTGGCCTACATGTAACGTGACTTCTGTTAGCAAGTCCT TCACATTCAGATGACTGCAACAGTTGAACATGCACATTACTTTTTTCCACATTTCTGAGTTACAGGCATATCCTG TCTTTTTGTGCCATGAATTTCATAAGAACTTCAGTAAGATATAGACGTGTTTTCCTGTCCGAAAAATCACTGATA CACATTTCCTAAAAAAACAGGAATGGCCTTGACTATGAGGGAATGGAAAGGAGAAAACCTGAGCAATGGGAGGAA AGAACAAAACCAGTTGAACATTTGTCAAATGAATGAGTAATAGAATAAGTTGAAGGGAAGATTGAGTAGGTAGAA CTCCTCAATACCTTTGCTATGGTGTAGAGACAAAGAAAAAGTTACCCATAGCTATGTGAAGGGGCAAATGGGCAG TGCACTGCATAGGTAAAGGCATAAGCAGTGGCAGATGCATAGGAATATACAGCCACCTATTTCCATTCTTGTATT TAGCTGGCTGCCTGGATGAATAAAGAGAATATTTAATCACTGTAGTAAGGCATGAGAGACTAGAGGCAGAGAG ATACATTTAGAACAAGTATGTAGCTATGGGAATTAAATGAGTAAAACCTATTATATGCTTAGCATTTATTACTTA ATGTAGCGTTAACTAGGGATTGTTTCTGTCCTTGAGGAGGTTTATAGGTAAGAATAGGCAGTATAACAATTGGAG AAGTTAATAAATATATTTTTTAAATTGAGAGCTATTATAAAGGCAAGGAATAGAGAATAGCAACATGGATTTA ACATGTGAGGTCTGCAAGGAGGCCTCTCCAGGGAGCAGTAAAGGGGACACTGGTTTGAGATCATATGATGTAGGT AAGCAGAGGCCTTCTTAACCACAGTGAGCTTGACTGGATTCTGAGAATGAAGAAGATGAAAAAAATTTAAGTAT AGATTCTCGACCTCTCATCTTCATCAGAATTATCATGTAGAGAATATTAAATATCCTTCCAGGACTGCAGAGTCT GATCCAGGTGGTTTGGGTGGTGTCTAAACCTCAGTGTTAGTAACAAGCTATGTGGTGATTCTGATCCACACCTCA ATATGAGAACCACTGACTTAAAATGTTTACTTCATCACCAATCTTGCTATTTTGTATGAACTCTCATTTTTCCTG ATGTTCCCTTTGGCTTTTTTTTTTTCTTTCCAAATTGTATAACAATATTTTAGAGTTTTGGTTAAGGATTACTTTTG TTGTCTTTATTTCTACATTAGAAATGTTGCTTCTTTTAGTAAAAGAAAACAGCATGTGTTTGCTTTCTTGTTTT CAGTGGAAGATAATGGAAAGAATTGAAAACCATGGCCTTAAGGGTCTCATTTTAAAAAATGATTGGGAATCCACA GGAAAAATTGAAGGACAGGAGAGCCTCAAGAAGGATACTTCAGTAGTGTGAAAATGCCATCTGAAAAGGTGTCC TCTTACCAGAAACGCACATCTGTTACTCCACATCAGAGACTTCATTTTGTTGATAAACCCTATGAATGTAAGGAA TGTGGGAAGGCGTTCAGAGTGCGCCAACAGCTTACTTTTCATCACAGAATTCATACTGGTGAAAAACCGTATGAA TGTAAGGAATGTGGGATGGCCTTCAGACAGACTGCACACCTTACTCGACATCAGAGACTTCATTCTGGTGAAAAA CTCTATGAATGTAAGGAATGTGGGGGAAGCTTTCATATGTGGTGCAGATCTTAGAGTACATCAGAAAATGCATATT GGTGAGAAGCCCTATGAATGTAAAGAATGTGGGAAGGCTTTTAGGGTACGAGGACAACTTACTCTGCATCAGAGG ATTCATACTGGTGAGAAACCCTATGTGTGTAAAGAGTGTGGAAAAGCCTTTAGACAGTACGCACACCTGACTCGG CATCAGAAGCTTAATAGTGCTGACAGGCTCTATGAATGCAAAGAATGTGGGAAGGCCTTTTTGTGTGGCTCTGGT CTTAGAGTACATCACAAACTTCATACTGGTGAGAAACCCTATGAATGTAAGGAATGCGGGAAGGCCTTTAGAGTG CGACAACAACTAACACTCCATCAGAGAATTCATACTGGTGAGAAACCCTATGAATGTAAGGAATGTGGAAAGACC TTTAGCCGTGGTTATCATCTTATTCTCCATCACAGAATTCATACTGGTGAAAAACCTTACGAATGTAAGGAATGC TGGAAAGCCTTTAGTCGCTACTCACAACTTATTTCACATCAGAGTATTCATATTTGGTGTTTAAGCCCTATGACTGT ${\tt AAGGAATGCGGGAAGGCCTTCAGACTACTTTCACAACTCACAGCATCAGAGTATTCATATTGGTGAGAAACCT}$ TATAAATGTAAGGAATGTGGCAAGGCCTTTAGATTGCGCCAAAAACTTACTCTACATCAGAGCATTCATACTGGC GAAAAACCCTTTGAGTGTAAGGAATGTAGGAAGGCCTTTAGACTTAATTCATCCCTTATTCAACATCTGAGAATT CATTCTGGTGAGAAACCCTATGAATGTAAGGAATGTAAGAAGGCCTTTAGGCAACATTCACACCTTACTCATCAT $\tt CTGAAAATTCATAATGTAAAAATC\underline{TAA}GAAAGTCTTTTCAACTTCTGTGTTATAGAACATTCTATGAATGTAGTA$ ATTAATCTATTTTGCTCCATACATGCAACTGCGTTGGCATTAGAGGTTTTATACCATTAAAAGAGTGTGACAATG TATTGTAGTCCATCATCACTCAAACCTGAAACTTCAGCATATTTGTTCTAAAAACTAATCCTGTTATAAGAATGA AAAAGACATTTACCGTCATCCCTATCCCATCACTTTGTGTCATACTGGACAAGACGCTTAACTGCTCTGTGCTAT

5853/6881. FIGURE **5396B**

ATCCCTCTGTTGTATACAGGAATCTACATCCCTCTGTGACTGCTTCGCCCAGTAGAATATGGTAGACGTACTGCT GTGCTGGTTTCTTGACTCAGACTTTACTGGTAGGGTTACTTCATCTCATGAAATGACAGAACTGTCTTGTTACAA AGTCTGGCTACTTTGCTGAAGAGACCACATGAAGAGGCCCTGAAACTACGTAGAGAGGGAGAGGCACCTGCTGAA CCCTGTCTTCTTGACATCCACCAAGATACCAGACATTTGAGTGAAATTTTGGATCCACCAGACCAGCCACCAGCT AAATGCCAGTGAGCGACTTGGTAACCTGAACTGATGCCATGTAGAATGGAAGAATTGACCAGCTGAGCCCCTGGC ATCATACTAAATATTTATTTTTACATAATTCATACTAAAGGCTGTGGGCATAATGAGTATAGAAATGCCTTCCAC CAACATTTAATCTTCATTGAACTTGAGATATCTTATTCTCGTTAAAATATTGAAAGTAAGGAATTCCTTTCCAGT TTGTTCATTAAAAAACAGATACCCTAGACCAGGTGAGGTGGCCCATGCCTGTAAATCCAGCACTTTGGGAGGCCA AGTAAGGACGATTGCTTGAGGCCAGAAGTTCGAGACCAGCCTGGGCAACATGGTGAGACCCTGTCTCTACCAAAA AACTTTAAAAATTAGCTGGGCATAATGGTGCATGCCTGTAGTCCTAGCTACTCGAGGCTGAGGTGGGAGGATCAT TTGAACCCAAGAGTTGAGGCTTCAGTGAGCTGTGATTGTACCACTGCACTCCAGCTTGAGTGACTGCAAGACCCT GTCTCAAAAAAAAAAAAAAAAACTACAATCAGTATTCTCTGGCCCCAGTCAATATTAAAAATTGACAAAGGATAACA TGAAACTTTGGAAATTAAAAGTCACCTGTATTATGAAGCCCCATTAATTTTTTAAACTACTTCATTGTTTTTAA AAATGCTAAATTGTCAATTTAGCATTTTGAGGCAATCCCCTCAAATTGGCTCCTGTGTCCTTTTATCATGACCAC TCCAACCTTTGAGCTTTTTTTTTTCCTGAACCAAATGCATTGATTAGTTATGGAGCATACTAGAGCATTATTAAC AAATAAAGGAAAAGAATGGAATATTTACCTTGCCTATCCTTTACAAACTATATTTCAAGACAAACCAAAAGTTGGT GAAGGAAAGTTGTTGATTAGAGAATTCCAACTGGTTAAAAGGTCAAAGGAGGCCAGGCGGGGGGCTCAAGCCTG TAATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCGTGAGGTCAGGAGATCAAGACCATCCTGGCTAACACGG TGAAACCCCATCTCTACTAAAAATACAAAAAATTCGCCGGGCGTGGTGGCAGGCGCCTGTAGTCCCAGCTACTCA GGAGGCTGAGGCAGGAGAATGGCTTGAACCCGGGAGGCGGAGCTTGCAGTGAGCCGAGATCGCGCCACTGCACTC ATAGAATTTGAAAACTACGCTCTTTAATTTTACAAAATCATGGATTTTCGTGGTGATAGCAATGGATGCGAAGAC CATTAGGTGAAAAATGGATAGGAAGCTTATAATGCATGGAGCAGAATGACAGGACACTAATCTATATTAACATCT CTAAATGAGATCAGCCAGATGAACTTGATGTGATGAAATGGATACACACAGTGGACACCTGTGAAGTTTTCTTGG CTCCCCAAAACTGAGAAGTACAAGTTAGTCTCCAAACCTAATTACCAGTTTACAGGAAACATGGGGAATAAAAG AACAAATTAACAACAAAGAAGCAAACAACCAAATGCACAATTTGGGAAATTCTGCAGAAGTAATGGCCTAGTT TTTTAACCAATACATGTC

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5854/6881 FIGURE 5397

MILLLVKENSMCLLSCFILDLETKYETKKLSLENDIYEINLSQWKIMERIENHGLKGLILKNDWESTGKIEGQER PQEGYFSSVKMPSEKVSSYQKRTSVTPHQRLHFVDKPYECKECGKAFRVRQQLTFHHRIHTGEKPYECKECGMAF RQTAHLTRHQRLHSGEKLYECKECGEAFICGADLRVHQKMHIGEKPYECKECGKAFRVRGQLTLHQRIHTGEKPY VCKECGKAFRQYAHLTRHQKLNSADRLYECKECGKAFLCGSGLRVHHKLHTGEKPYECKECGKAFRVRQQLTLHQ RIHTGEKPYECKECGKTFSRGYHLILHHRIHTGEKPYECKECWKAFSRYSQLISHQSIHIGVKPYDCKECGKAFR LLSQLTQHQSIHIGEKPYKCKECGKAFRLRQKLTLHQSIHTGEKPFECKECRKAFRLNSSLIQHLRIHSGEKPYECKECKKAFRQHSHLTHHLKIHNVKI

TGCCAGTCCATCTGACATCAAAGCCAGTGTCTCTAATGGTGACACCACCCTCCTCTGCAGCAGGAGGCAGAGCTG GCCTCGAAGCGGAGGATCCCTGTGTCCCAGCCGGGCATGGCGACCCCACCAGCTTTTCGATGACACAAGTTCAG $\verb|CCCAGAGCCGGGGCTATGGGGCCCAGCGGGCACCTGGTGGCCTGAGTTATCCTGCAGCCTCTCCCACGCCCCATG|$ CAGCCTTCCTGGCTGACCCGGTGTCCAACATGGCCATGGCCTATGGGAGCAGCCTGGCCGCGCGCAGGGCAAGGAGC TGGTGGATAAGAACATCGACCGCTTCATCCCCATCACCAAGCTCAAGTATTACTTTGCTGTGGACACCATGTATG TGGGCAGAAAGCTGGGCCTGCTGTTCTTCCCCTACCTACACCAGGACTGGGAAGTGCAGTACCAACAGGACACCC $\tt CGGTGGCCCCCGCTTTGACGTCAATGCCCCGGACCTCTACATTCCAGCAATGGCTTTCATCACCTACGTTTTGG$ TGGCTGGTCTTGCGCTGGGGACCCAGGATAGGTTCTCCCCAGACCTCCTGGGGCTGCAAGCGAGCTCAGCCCTGG $\verb|CCTGGCTGACCCTGGAGGTGCTGGCCATCCTGCTCAGCCTCTATCTGGTCACTGTCAACACCGACCTCACCACCA| \\$ AGATTGGCTACTACCTGGTGCTGGGCTGGTGCTGCGTAGCCATCTTTGTGTTCATGATCCGGACGCTGCGGCTGA AGATCTTGGCAGACGCAGCAGCTGAGGGGGTCCCGGTGCGTGGGGCCCGGAACCAGCTGCGCATGTACCTGACCA $\tt TGGCGGTGGCGGCGCGCGCCTATGCTCATGTACTGGCTCACCTTCCACCTGGTGCGG\underline{TGA}_{\tt GCGCGCCCGCTGA}$ $\verb|CCACCCTGTCTGGCCACAGGCACCGCCTCCATCCCATGTCCCGCCCAGCCCCGCCCCCAACCCAAGGTGCTGAGA|\\$ GATCTCCAGCTGCACAGGCCACCGCCCCAGGGCGTGGCCGCTGTTACAGAAACAATAAACCCTGATGGGCATGG

 $\label{thm:coling} $$\operatorname{MRFARSPLP} LGPQLLLTLFPCSLEAEDPCVPAGHGDPHQLFDDTSSAQSRGYGAQRAPGGLSYPAASPTPHAAF$$ LADPVSNMAMAYGSSLAAQGKELVDKNIDRFIPITKLKYYFAVDTMYVGRKLGLLFFPYLHQDWEVQYQQDTPVA$$ PRFDVNAPDLYIPAMAFITYVLVAGLALGTQDRFSPDLLGLQASSALAWLTLEVLAILLSLYLVTVNTDLTTIDL$$ VAFLGYKYVGMIGGVLMGLLFGKIGYYLVLGWCCVAIFVFMIRTLRLKILADAAAEGVPVRGARNQLRMYLTMAV$$ AAAQPMLMYWLTFHLVR$$$

 $\label{thm:magn} $$ MYEQLKGEWNRKSPNLSKCGEELGRLKLVLLELNFLPTTGTKLTKQQLILARDILEIGAQWSILRKDIPSFERYM $$ AQLKCYYFDYKEQLPESAYMHQLLGLNLLFLLSQNRVAEFHTELERLPAKDIQTNVYIKHPVSLEQYLMEGSYNK $$ VFLAKGNIPAESYTFFIDILLDTIRDEIAGCIEKAYEKILFTEATRILFFNTPKKMTDYAKKRGWVLGPNNYYSF $$ ASQQQKPEDTTIPSTELAKQVIEYARQLEMIV $$$

5860/6881 FIGURE 5403A

CAGCCCCTCCTCTGTTCCCCGACCTCAGACCCTGGGCTTCCGACCTCGACATCATGGGTGACGCAGAAGGCGA AGACGAGGTCCAGTTCCTGCGGACGGACGATGAGGTGGTCCTGCAGTGCAGCGCTACCGTGCTCAAGGAGCAGCT CAAGCTCTGCCTGGCCGCGAGGGCTTCGGCAACCGCCTGTGCTTCCTGGAGCCCACTAGCAACGCGCAGAATGT TAACACGGTGGAGGCTGGCGTGGAGTCATCCCAGGGCGGGGGACACAGGACGCTCCTGTATGGCCATGCCATCCT CGATGTGGGACTGCAGGAGGACGCAACAGGAGAGGCTTGCTGGTGGACCATGCACCCAGCCTCCAAGCAGAGGTC TGAAGGAGAAAAGGTCCGCGTTGGGGATGACATCATCCTTGTCAGTGTCTCCTCCGAGCGCTACCTGCACCTGTC GACCGCCAGTGGGGAGCTCCAGGTTGACGCTTCCTTCATGCAGACACTATGGAACATGAACCCCATCTGCTCCCG CTGCGAAGAGGGCTTCGTGACGGGAGGTCACGTCCTCCGCCTCTTTCATGGACATATGGATGAGTGTCTGACCAT TTCCCCTGCTGACAGTGATGACCAGCGCAGACTTGTCTACTATGAGGGGGGGAGCTGTGTGCACTCATGCCCGCTC GCATGTCACTACCGGGCAGTACCTAGCGCTCACCGAGGACCAGGGCCTGGTGGTGGTTGACGCCAGCAAGGCTCA CACCAAGGCTACCTCCTTCTGCTTCCGCATCTCCAAGGAGAAGCTGGATGTGGCCCCCAAGCGGGATGTGGAGGG CATGGGCCCCCTGAGATCAAGTACGGGGAGTCACTGTGCTTCGTGCAGCATGTGGCCTCAGGACTGTGGCTCAC CTATGCTGCTCCAGACCCCAAGGCCCTGCGGCTCGCGTGCTCAAGAAGAAGGCCATGCTGCACCAGGAGGGCCA TGGCCTATACAACCAGTTCATCAAGAGCCTGGACAGCTTCAGCGGGAAGCCACCGGGGCCTCGGGGCCACCCGCTGG CTTGCAGCACGAGAGAGCAGAGCAAGCTGCGAAGCCTGCGCAACCGCCAGAGCCTCTTCCAGGAGGAGGGGGAT GCTCTCCATGGTCCTGAATTGCATAGACCGCCTAAATGTCTACACCACTGCTGCCCACTTTGCTGAGTTTGCAGG GGAGGAGCCGAGTCCTGGAAAGAGATTGTGAATCTTCTCTATGAACTCCTAGCTTCTCTAATCCGTGGCAA TGGCATCCTGGAGGTCCTGTACTGTGTCCTCATTGAGAGTCCAGAGGTTCTGAACATCATCCAGGAGAATCACAT CAAGTCCATCATCTCCCTCTGGACAAGCATGGGAGGAACCACAAGGTCCTGGACGTGCTATGCTCCCTGTGTGT GTGTAATGGTGTGGCTGTACGCTCCAACCAAGATCTTATTACTGAGAACTTGCTGCCTGGCCGTGAGCTTCTGCT GCAGACAACCTCATCAACTATGTCACCAGCATCCGCCCCAACATCTTTGTGGGCCGAGCGGAAGGCACCACGCA GGTGGGCTGGGCCCTCACCGAGGGCTACACCCCCTACCCTGGGGCCGGCGAGGGCTGGGGCGGCAACGGGGTCGG CGATGACCTCTATTCCTACGGCTTTGATGGACTGCATCTCTGGACAGGACACGTGGCACGCCCAGTGACTTCCCC CATCAACGGCTGCCCGTGCAGGGTGTCTTTGAGTCCTTCAACCTGGACGGGCTCTTCTTCCCTGTTGTCAGCTT CTCGGCTGGTGTCAAGGTGCGGTTCCTCCTTGGTGGCCGCCATGGTGAATTCAAGTTCCTGCCCCCACCTGGCTA TGCTCCATGCCATGAGGCTGTGCTCCCTCGAGAGCGACTCCATCTTGAACCCATCAAGGAGTATCGACGGGAGGG GCCCGGGGGCCTCACCTGGTGGGCCCCAGTCGCTGCCTCTCACACACCGACTTCGTGCCCTGCCCTGTGGACAC TGTCCAGATTGTCCTGCCGCCCCATCTGGAGCGCATTCGGGAGAAGCTGGCGGAGAACATCCACGAGCTCTGGGC GCTAACCCGCATCGAGCAGGGCTGGACCTACGGCCCGGTTCGGGATGACAACAAGAGGCTGCACCCGTGTCTTGT GGACTTCCACAGCCTTCCAGAGCCTGAGAGGAACTACAACCTGCAGATGTCTGGGGAGACGCTCAAGACTCTGCT GGCTCTGGGCTGCCACGTGGGCATGGCGGATGAGAAGGCGGAGGACAACCTGAAGAAGACAAAACTCCCCAAGAC GTATATGATGAGCAATGGGTACAAGCCGGCTCCGCTGGACCTGAGCCACGTGCGGCTGACGCCGGCGCAGACGAC ACTGGTGGACCGTCTGGCAGAAAATGGGCACAACGTGTGGGCCCGAGACCGCGTGGGCCAGGGCTGGAGCTACAG CGCAGTGCAGGACATCCCAGCGCGCGAAACCCTCGGCTGGTGCCCTACCGCCTGCTGGATGAAGCCACCAAGCG CAGCAACCGGGACAGCCTCTGCCAGGCCGTGCGCACCCTCCTGGGCTACGGCTACAACATCGAGCCTCCTGACCA GGAGCCCAGTCAGGTGGAGAACCAGTCTCGTTGTGACCGGGTGCGCATCTTCCGGGCAGAGAAATCCTATACAGT GCAGAGCGGCCGCTGGTACTTCGAGTTTGAAGCAGTCACCACAGGCGAGATGCGCGTGGGCTGGGCGAGGCCCGA GCTGAGGCCTGATGTAGAGCTGGGAGCTGACGAGCTGGCCTATGTCTTCAATGGGCACCGCGGCCAGCGTGGCA CTTGGGCAGTGAACCATTTGGGCGCCCCTGGCAGCCGGGCGATGTCGTTGGCTGTATGATCGACCTCACAGAGAA

1

5861/6881 FIGURE 5403B

CACCATTATCTTCACCCTCAATGGCGAGGTCCTCATGTCTGACTCAGGCTCCGAAACAGCCTTCCGGGAGATTGA GATTGGGGACGGCTTCCTGCCCGTCTGCAGCTTGGGACCTGGCCAGGTGGGTCATCTGAACCTGGGCCAGGACGT GAGCTCTCTGAGGTTCTTTGCCATCTGTGGCCTCCAGGAAGGCTTCGAGCCATTTGCCATCAACATGCAGCGCCC AGTCACCACCTGGTTCAGCAAAGGCCTGCCCCAGTTTGAGCCAGTGCCCCTTGAACACCCTCACTATGAGGTATC GGTGGAGATGCTTTTCCTGCGGCTGAGCCTCCCAGTCCAGTTCCACCAGCACTTCCGCTGCACTGCAGGGGCCAC AAACCTGCGCCGCTCAGCTGGGGGCTGGAGCGAGGCAGAGAACGGCAAAGAAGGGACTGCGAAGGAGGGCGCCCC GAACAAGAAGAGAGGCTTCTTATTCAAGGCCAAGAAGGTCGCCATGATGACCCAGCCACCGGCCACCCCACGCT GCCCCGACTCCCTCACGACGTGGTGCCTGCAGACAACCGCGATGACCCCGAGATCATCCTCAACACCACCACGTA CTATTACTCCGTGAGGGTCTTTGCTGGACAGGAGCCCAGCTGCGTGTGGGCCGGGCTGGGTCACCCCTGACTACCA TCAGCACGACATGAGCTTCGACCTCAGCAAGGTCCGGGTCGTGACGGTGACCATGGGGGGATGAACAAGGCAACGT CCACAGCAGCCTCAAGTGTAGCAACTGCTACATGGTGTGGGGCGGAGACTTTGTGAGTCCCGGGCAGCAGGGCCG GATCAGCCACACGGACCTTGTCATTGGGTGCCTGGTGGACTTGGCCACTGGCTTAATGACCTTTACAGCCAATGG ${\tt CCAGAACGTCATCCAGTTTGAGCTGGGGAAGCAGAAGAACATCATGCCGTTGTCAGCCGCCATGTTCCAAAGCGA}$ GCGCAAGAACCCGGCCCCGCAGTGCCCACCGCGGCTGGAGATGCAGATGCTGATGCCAGTGTCCTGGAGCCGCAT GCCCAACCACTTCCTGCAGGTGGAGACGAGGCGTGCCGGCGAGCGGCTGGGCTGGGCCGTGCAGTGCCAGGAGCC GCTGACCATGATGGCGCTGCACATCCCCGAGGAGAACCGGTGCATGGACATCCTGGAGCTGTCGGAGCGCCTGGA CCTGCAGCGCTTCCACTCGCACACCCTGCGCCTCTACCGCGCTGTGTGCGCCCTGGGCAACAATCGCGTGGCGCA CGCTCTGTGCAGCCACGTAGACCAAGCTCAGCTGCTGCACGCCCTGGAGGACGCGCACCTGCCAGGCCCACTGCG ATACATCGTGCCCCTCACGCCTGAGACCCGCGCCATCACGCTCTTCCCTCCTGGAAGGAGCACAGAAAATGGTCA CCCCGGCATGGCCTGCCGGAGTTGGAGTCACCACTTCGCTGAGGCCCCCGCATCATTTCTCGCCCCCCTGTTT CGTGGCCGCTCTGCCAGCTGCTGGGGCAGCAGAGGCCCCGGCCCGCCTCAGCCCTGCCATCCCGCTGGAGGCCCT GCGGGACAAGGCACTGAGGATGCTGGGGGAGGCGGTGCGCGACGGTGGGCAGCACGCTCGCGACCCCGTCGGGGG $\tt CTCCGTGGAGTTCCAGTTTGTGCCTGAGCTCGTGTCCACCCTGCTGGTGATGGGCATCTTTGGCGATGA$ GGATGTGAAACAGATCTTGAAGATGATTGAGCCTGAGGTCTTCACTGAGGAAGAAGAGGAGGAGGACGAGGAGGA AGAGTCTGTGAAGTTACAGATGTGCCACCTGCTGGAGTATTTCTGTGACCAAGAGCTGCAGCACCGTGTGGAGTC CCTGGCAGCCTTTGCGGAGCGCTATGTGGACAAGCTCCAGGCCAACCAGCGGAGCCGCTATGGCCTCATAAA AGCCTTCAGCATGACCGCAGCAGAGACTGCAAGACGTACCCGCGAGTTCCGCTCCCCACCCCAGGAACAGATCAA TATGCTATTGCAATTCAAAGATGGTACAGATGAGGAAGACTGTCCTCTCCCTGAAGAGATTCGACAGGATTTGCT TGACTTTCATCAAGACCTGCTGGCACACTGTGGAATTCAGCTAGATGGAGGAGGAGGAACCAGAGGAAGAGAC CACCCTGGGCAGCCGCCTCATGAGCCTGTTGGAGAAAGTGCGGCTGGTGAAGAAGAAGAAGAAGAAACCTGAGGA GGAGCGGTCAGCAGAGGAGCAAACCCCGGTCCCTGCAGGAGCTGGTGTCCCACATGGTGGTGCGCTGGGCCCA AGAGGACTTCGTGCAGAGCCCCGAGCTGGTGCGGGCCATGTTCAGCCTCCTGCACCGGCAGTACGACGGGCTGGG TGAGCTGCTGCCGCGCGCGCGCGTACACCATCTCACCGTCCTCCGTGGAAGACACCATGAGCCTGCTCGA GTGCCTCGGCCAGATCCGCTCGCTCATCGTGCAGATGGGCCCCCAGGAGGAGAACCTCATGATCCAGAGCAT CGGGAACATCATGAACAACAAGTCTTCTACCAACACCCGAACCTGATGAGGGCGCTGGGCATGCACGAGACGGT CATGGAGGTCATGGTCAACGTCCTCGGGGGCGGCGAGTCCAAGGAGATCCGCTTCCCCAAGATGGTGACAAGCTG $\tt CTGCCGCTTCCTCTGCTATTTCTGCCGAATCAGCCGGCAGAACCAGCGCTCCATGTTTGACCACCTGAGCTACCT$ GCTGGAGAACAGTGGCATCGGCCTGGGCATGCAGGCCTCCACGCCCCTGGACGTGGCTGCCTCCGTCATTGA ${\tt CAACAATGAGCTGGCCTTGGCATTGCAGGAGCAGGACCTGGAAAAGGTTGTGTCCTACCTGGCAGGCTGTGGCCT}$ ${\tt CCAGAGCTGCCCCATGCTTGTGGCCAAAGGGTACCCAGACATTGGCTGGAACCCCTGTGGTGGAGAGCGCTACCT}$ ${\tt GGACTTCCTGCGCTTTGCTGTCTCGTCAACGGCGAGAGCGTGGAGGAGAACGCCAATGTGGTGGTGCGGCTGCT}$

5862/6881 **FIGURE 5403C**

GGCCATCCGCATCTCCGAGGACCCTGCGAGGGATGGCCCAGGCATCCGCAGGGACCGGCGGCGCGAGCACTTTGG TGAGGAACCGCCTGAAGAAAACCGGGTGCACCTGGGACACGCCATCATGTCCTTCTATGCCGCCTTGATCGACCT GCTCGGACGCTGTGCACCAGAGATGCATCTAATCCAAGCCGGCAAGGGTGAGGCCCTGCGGATCCGCGCCATCCT CCGCTCCCTTGTGCCCTTGGAGGACCTTGTGGGCATCATCAGCCTCCCACTGCAGATTCCCACCCTGGGCAAAGA TGGGGCTCTGGTGCAGCCAAAGATGTCAGCATCCTTCGTGCCGGACCACAAGGCGTCCATGGTGCTCTTCCTGGA CCGTGTGTATGGCATCGAGAACCAGGACTTCTTGCTGCACGTGCTGGACGTGGGGTTCCTGCCCGACATGAGGGC AGCCGCCTCGCTGGACACCGCCACTTTCAGCACCACCGAGATGGCGCTGGCGCTGAACCGCTACCTGTGCCTGGC CGTGCTGCCGCTCATCACCAAGTGTGCGCCGCTCTTTGCGGGCACAGAACACCGCGCCATCATGGTGGACTCTAT GCTGCATACCGTGTACCGCCTGTCTCGGGGTCGTTCGCTCACCAAGGCGCAGCGTGACGTCATCGAGGACTGCCT CATGTCGCTCTGCAGGTACATCCGCCCGTCGATGCTGCAGCACCTGTTGCGCCGCCTGGTGTTCGACGTGCCCAT ACCCACGGGCTGGGCCAACTTCGGGGTCACCTCAGAGGAGGAGCTGCACCTCACACGGAAACTCTTCTGGGGCAT CTTTGACTCTCTGGCCCATAAGAAATACGACCCGGAGCTGTACCGCATGGCCATGCCTTGTCTGTGCGCCATTGC CGGGGCTCTGCCCCCGACTATGTGGATGCCTCATACTCATCTAAGGCAGAGAAAAAGGCCACAGTGGATGCTGA AGGCAACTTTGATCCCCGGCCTGTGGAGACCCTCAATGTGATCATCCCGGAGAAGCTGGACTCCTTCATTAACAA GTTTGCGGAGTACACACACGAGAAGTGGGCCTTCGACAAGATCCAGAACAACTGGTCCTATGGAGAGAACATAGA CGAGGAGCTGAAGACCCACCCCATGCTGAGGCCCTACAAGACCTTTTCAGAGAAGGACAAAGAGATTTACCGCTG GAAGACGGAAAAGAAAAAAACGCGGAAGATATCACAAAGTGCCCAGACCTATGATCCTCGAGAAGGCTACAACCC TCAGCCCCCGACCTTAGTGCTGTTACCCTGTCCCGGGAGCTGCAGGCCATGGCAGAACAACTGGCAGAAAATTA CTACGACACGCTCACGGCCAAGGAAGGCACGAGATCGAGAAGGCCCAGGAGCTACTGAAATTCCTGCAGAT GAATGGCTACGCGGTTACAAGAGGCCTTAAGGACATGGAACTGGACTCGTCTTCCATTGAAAAGCGGTTTGCCTT TGGCTTCCTGCAGCAGCTGCTGCGCTGGATGGACATTTCTCAGGAGTTCATTGCCCACCTGGAGGCTGTGGTCAG CAGTGGGCGAGTGGAAAAGTCCCCACATGAACAGGAGATTAAATTCTTTGCCAAGATCCTGCTCCCTTTGATCAA CCAGTACTTCACCAACCACTGCCTCTATTTCTTGTCCACTCCGGCTAAAGTGCTGGGCAGCGGTGGCCACGCCTC TAACAAGGAGAAGGAAATGATCACCAGCCTCTTCTGCAAACTTGCTGCTCTCGTCCGCCACCGAGTCTCTCTTT TGGGACAGACGCCCCAGCTGTGGTCAACTGTCTTCACATCCTGGCCCGCTCCCTGGATGCCAGGACAGTGATGAA GTCAGGCCCTGAGATCGTGAAGGCTGGCCTCCGTCCTTCTTCGAGAGTGCCTCGGAGGACATCGAGAAGATGGT GGAGAACCTGCGGCTGGGCAAGGTGTCGCAGGCGCGCACCCAGGTGAAAGGCGTGGGCCAGAACCTCACCTACAC CACTGTGGCACTGCTGCCGGTCCTCACCACCCTCTTCCAGCACATCGCCCAGCACCAGTTCGGAGATGACGTCAT CCTGGACGACGTCCAGGTCTCTTGCTACCGAACGCTGTGCAGTATCTACTCCCTGGGAACCACCAAGAACACTTA GCCGCAGCTGAACGAGTACAACGCCTGCTCCGTGTACACCACCAAGTCTCCGCGGGAGCGGGCCATCCTGGGGCT CCCCAACAGTGTGGAGGAGATGTGTCCCGACATCCCGGTGCTGGAGCGGCTCATGGCAGACATTGGGGGGCTGGC CGAGTCAGGTGCCCGCTACACAGAGATGCCGCATGTCATCGAGATCACGCTGCCCATGCTATGCAGCTACCTGCC CACCTCTGACCACCTCAACTCCCTGGGGAATATCCTGAGAATCATCGTCAACAACCTGGGCATTGACGAGGC CTTCATCCCAACTATCGGGCGGCTGCGCAAGAGGGCAGGGAAGGTGGTGCCGAGGAGGAGCAGCTGCGCCTGGA GGCCAAGGCGGAGGCCCAGGAGGGCGAGCTGCTGGTGCGGGACGAGTTCTCTGTGCTCTGCCGGGACCTCTACGC CCTGTATCCGCTGCTCATCCGCTACGTGGACAACAACAGGGCGCAGTGGCTGACGGAGCCGAATCCCAGCGCGGA GGAGCTGTTCAGGATGGTGGGCGAGATCTTCATCTACTGGTCCAAGTCCCACAACTTCAAGCGCGAGGAGCAGAA CTTTGTGGTCCAGAATGAGATCAACAACATGTCCTTCCTGACTGCTGACAACAAAAGCAAAAATGGCTAAGGCGGG AGATATACAGTCCGGTGGCTCGGACCAGGAACGCACCAAGAAGAAGCGCCGGGGGGACCGGTACTCTGTGCAGAC GTCACTGATCGTGGCCACACTGAAGAAGATGCTGCCCATCGGCCTGAATATGTGTGCGCCCACCGACCAAGACCT CATCACGCTGGCCAAGACCCGTTACGCCCTGAAAGACACAGATGAGGAGGTCCGGGAATTTCTGCACAACAACCT

5863/6881 FIGURE 5403D

TCACCTTCAGGGAAAGGTCGAAGGCTCCCCGTCTCTGCGCTGGCAGATGGCTCTGTACCGGGGCGTCCCGGGTCG CGAGGAGGACGCCGATGACCCCGAGAAAATCGTGCGCAGAGTCCAGGAAGTGTCAGCCGTGCTCTACTACCTGGA ${\tt CCAGACCGAGCACCCTTACAAGTCTAAGAAGGCCGTGTGGCACAAGCTTTTGTCCAAACAGCGCCGGCGGGCAGT}$ CGTGGCCTGTTTCCGTATGACGCCCCTGTACAACCTGCCCACGGCCACGGGCATGTAACATGTTCCTGGAGAGCTA CAAGGCTGCATGGATCCTGACTGAAGACCACAGTTTTGAGGACCGCATGATAGATGACCTTTCAAAAGCTGGGGA GCAGGAGGAGGAGGAGGAGGAGGAGAGAAGAAGCCAGACCCCCTGCACCAGTTGGTCCTGCACTTCAGCCG CACTGCCCTGACGGAAAAGAGCAAACTGGATGAGGATTACCTGTACATGGCCTATGCTGATATCATGGCAAAGAG CTGCCACCTGGAGGAGGGGGGGGAGAACGGTGAAGCTGAAGAGGAGGTTGAGGTCTCCTTTGAGGAGAAACAGAT GGAGAAGCAGAGGCTCTTGTACCAGCAAGCACGGCTGCACACCCGGGGGGGCGGCCGAGATGGTGCTGCAGATGAT CAGTGCCTGCAAAGGAGACAGGTGCCATGGTGTCCTCCACCCTGAAGCTGGGCATCTCCATCCTCAATGGAGG GGCACTGATGCAAACATGCAGCGTCCTGGATCTCAATGCCTTTGAGAGACAGAACAAGGCCGAGGGGCTGGGCAT GGTGAATGAGGATGGCACTGTCATCAATCGCCAGAACGGAGAGAGGTCATGGCGGATGATGAATTCACACAAGA GAACACGACCACTATTAACATCATCATTTGCACTGTGGACTACCTCCTGCGGCTGCAGGAATCCATCAGCGACTT CTACTGGTACTACTCGGGCAAGGATGTCATTGAAGAGCAGGGCAAGAGGAACTTCTCCAAAGCCATGTCGGTGGC TAAGCAGGTGTTCAACAGCCTCACTGAGTACATCCAGGGTCCCTGCACCGGGAACCAGCAGAGCCTGGCGCACAG CCAGATCGAGCTGCTGAAGGAGCTGCTGGATCTGCAGAAGGACATGGTGGTGATGTTGCTGTCGCTACTAGAAGG GAACGTGGTGAACGGCATGATCGCCCGGCAGATGGTGGACATGCTCGTGGAATCCTCATCCAATGTGGAGATGAT CCTCAAGTTCTTCGACATGTTCCTGAAACTCAAGGACATTGTGGGGCTCTGAAGCCTTCCAGGACTACGTAACGGA TCCCCGTGGCCTCATCTCCAAGAAGGACTTCCAGAAGGCCATGGACAGCCAGAAGCAGTTCAGCGGTCCAGAAAT CCAGTTCCTGCTTTCGTGCTCCGAAGCGGATGAGAACGAAATGATCAACTGCGAAGAGTTCGCCAACCGCTTCCA GGAGCCAGCACGCGACATCGGCTTCAACGTGGCGGTGCTGCTGACCAACCTGTCGGAGCATGTGCCGCATGACCC TCGCCTGCACAACTTCCTGGAGCTGGCCGAGAGCATCCTTGAGTACTTCCGCCCCTACCTGGGCCGCATCGAGAT CATGGGCGCGTCACGCCGCATCGAGCGCATCTACTTCGAGATCTCAGAGACCAACCGCGCCCAGTGGGAGATGCC CCAGGTGAAGGAGTCCAAGCGCCAGTTCATCTTCGACGTGGTGAACGAGGGCGGCGAGGCTGAGAAGATGGAGCT GCTCTGGGGGCTCGCTGTTCGGCGGCGCCTGGTGGAGGGCGCCAAGAAGGTGACGGTGACCGAGCTCCTGGCAGG CGGTGCCGACGGGGCGGTGGCCGTGACCGATGGGGGCCCCTTCCGGCCCGAAGGGGCTGGCGGTCTCGGGGACAT GGGGGACACGACGCCTGCGGAACCGCCCACACCCGAGGGCTCTCCCATCCTCAAGAGGAAATTGGGGGTGGATGG AGTGGAGGAGGTCCCGCCAGAGCCAGAGCCCGAGCCGGAACCAGAGCTGGAGCCGGAAAAGCCGATGCCGA AAAGAAGGAGGAGCTGGAGCGAATTCTGGGGAGAACTGGAGGTGCAGAGGTGAAGTTCCTGAACTACCTGTC CCGGAACTTTTACACCCTGCGGTTCCTTGCCCTCTTCTTGGCATTTGCCATCAACTTCATCTTGCTGTTTTATAA GGTCTCAGACTCTCCACCAGGGGAGGACGACATGGAAGGCTCAGCTGCTGGGGATGTGTCAGGTGCAGGCTCTGG TGGCAGCTCTGGCTGGGGGCTTGGGGGCCGGAGAGGGCGAGGGGCGATGAGGATGAGAACATGGTGTACTACTT CCTGGAGGAAAGCACAGGCTACATGGAACCCGCCCTGCGGTGTCTGAGCCTCCTGCATACACTGGTGGCCTTTCT $\tt CTGCATCATTGGCTATAATTGTCTCAAGGTGCCCCTGGTAATCTTTAAGCGGGAGAAGGAGCTGGCCCGGAAGCT$ ${\tt GGAGTTTGATGGCCTGTACATCACGGAGCAGCCTGAGGACGATGACGTGAAGGGGCAGTGGGACCGACTGGTGCT}$ CAACACGCCGTCTTTCCCTAGCAACTACTGGGACAAGTTTGTCAAGCGCAAGGTCCTGGACAAACATGGGGACAT $\tt CTACGGGCGGAGCGGATTGCTGAGCTACTGGGCATGGACCTGGCCACACTAGAGATCACAGCCCACAATGAGCG$

5864/6881 FIGURE 5403E

5865/6881 FIGURE 5404

5866/6881 FIGURE 5405

MAMFEQMRANVGKLLKGIDRYNPENLATLERYVETQAKENAYDLEANLAVLKLYQFNPAFFQTTVTAQILLKALT NLPHTDFTLCKCMIDQAHQEERPIRQILYLGDLLETCHFQAFWQALDENMDLLEGITGFEDSVRKFICHVVGITY QHIDRWLLAEMLGDLSDSQLKVWMSKYGWSADESGQIFICSQEESIKPKNIVEKIDFDSVSSIMASSQ

5867/6881 FIGURE 5406

5868/6881 FIGURE 5407

 ${\tt MSNVPHKSSLPEGIRPGTVLRIRGLVPPNASRFHVNLLCGEEQGSDAALHFNPRLDTSEVVFNSKEQGSWGREER} \\ {\tt GPGVPFQRGQPFEVLIIASDDGFKAVVGDAQYHHFRHRLPLARVRLVEVGGDVQLDSVRIF}$

5869/6881 FIGURE 5408

5870/6881 FIGURE 5409

GTGTTGTACGAAAGCGCGTCTGCGGCCGCAATGTCTGCTGAGAGTTGTAGTTCTGTGCCCTATCACGGCCACTCC GACGGGACAGAGCGGTCGGTGACAGCCTCAAGGGCTTCAGCACCGCGCCCATGCCAGAGCCAGACCCCTCTCACC GAGAAGCAGACATGGACTTCCTGCGGAACTTATTCTCCCAGACGCTCAGCCTGGGCAGCCAGAAGGAGCGTCTGC TGGACGAGCTGACCTTGGAAGGGGTGGCCCGGTACATGCAGAGCGAACGCTGTCGCAGAGTCATCTGTTTGGTGG AGTACCATCTTCCCTACCCAGAGGCCATCTTTGAGATCAGCTATTTCAAGAAACATCCGGAACCCTTCTTCGCCC TCGCCAAGGAACTCTATCCTGGGCAGTTCAAGCCAACCATCTGTCACTACTTCATGCGCCTGCTGAAGGACAAGG GGCTACTCCTGCGCTGCTACACGCAGAACATAGATACCCTGGAGCGAATAGCCGGGCTGGAACAGGAGGACTTGG TGGAGGCGCACGGCACCTTCTACACATCACACTGCGTCAGCGCCAGCTGCCGGCACGAATACCCGCTAAGCTGGA TGAAAGAGAGATCTTCTCTGAGGTGACGCCCAAGTGTGAAGACTGTCAGAGCCTGGTGAAGCCTGATATCGTCT TTTTTGGTGAGAGCCTCCCAGCGCGTTTCTTCTCCTGTATGCAGTCAGACTTCCTGAAGGTGGACCTCCTCCTGG TCATGGGTACCTCCTTGCAGGTGCAGCCCTTTGCCTCCTCATCAGCAAGGCACCCCTCTCCACCCCTCGCCTGC TCATCAACAAGGAGAAAGCTGGCCAGTCGGACCCTTTCCTGGGGATGATTATGGGCCTCGGAGGAGGCATGGACT TTGACTCCAAGAAGGCCTACAGGGACGTGGCCTGGCTGGATGCGACCAGGGCTGCCTGGCCCTTGCTGAGC GGGTCCCCAACCCCAGCACTTCAGCTTCCCCCAAGAAGTCCCCGCCACCTGCCAAGGACGAGGCCAGGACAACAG AGAGGGAGAAACCCCAGTGACAGCTGCATCTCCCAGGCGGGATGCCGAGCTCCTCAGGGACAGCTGAGCCCCAAC CGGGCCTGGCCCCTCTTAACCAGCAGTTCTTGTCTGGGGAGCTCAGAACATCCCCCAATCTCTTACAGCTCCCT CCCCAAAACTGGGGTCCCAGCAACCCTGGCCCCCAACCCCAGCAAATCTCTAACACCTCCTAGAGGCCAAGGCTT CCCCACGGGGCCAGGGCTACCCCAGAACTTTTAACTCTTCCAGGACAGGGAGCTTCGGGCCCCCACTCTGTCTC CTGCCCCGGGGGCCTGTGGCTAAGTAAACCATACCTAACCTACCCCAGTGTGGGTGTGGGCCTCTGAATATAAC GGCCCCTTCACGTGGGACCCACTTCCCATGCTGGATGGGCAGAAGACATTGCTTATTGGAGACAAATTAAAAAC AAAAACAACTAAC

5871/6881 FIGURE 5410

MAEPDPSHPLETQAGKVQEAQDSDSDSEGGAAGGEADMDFLRNLFSQTLSLGSQKERLLDELTLEGVARYMQSER CRRVICLVGAGISTSAGIPDFRSPSTGLYDNLEKYHLPYPEAIFEISYFKKHPEPFFALAKELYPGQFKPTICHY FMRLLKDKGLLLRCYTQNIDTLERIAGLEQEDLVEAHGTFYTSHCVSASCRHEYPLSWMKEKIFSEVTPKCEDCQ SLVKPDIVFFGESLPARFFSCMQSDFLKVDLLLVMGTSLQVQPFASLISKAPLSTPRLLINKEKAGQSDPFLGMI MGLGGGMDFDSKKAYRDVAWLGECDQGCLALAELLGWKKELEDLVRREHASIDAQSGAGVPNPSTSASPKKSPPP AKDEARTTEREKPQ

5872/6881 FIGURE **5411**

CGAAAGCGCGTCTGCGGCCGCAATGTCTGCTGAGAGTTGTAGTTCTGTGCCCTATCACGGCCACTCCCATTTCTG AGAGCGGTCGGTGACAGCCTCAAGGGCTTCAGCACCGCGCCCATGGCAGAGCCAGACCGACTCAGATTCAGACTC TGAGGGAGGAGCCGCTGGTGGAGAAGCAGACATGGACTTCCTGCGGAACTTATTCTCCCAGACGCTCAGCCTGGG CAGCCAGAAGGAGCGTCTGCTGGACGACCTGACCTTGGAAGGGGTGGCCCGGTACATGCAGAGCGAACGCTGTCG CCTCTATGACAACCTAGAGAAGTACCATCTTCCCTACCCAGAGGCCATCTTTGAGATCAGCTATTTCAAGAAACA TCCGGAACCCTTCTTCGCCCTCGCCAAGGAACTCTATCCTGGGCAGTTCAAGCCAACCATCTGTCACTACTTCAT GCGCCTGCTGAAGGACAAGGGGCTACTCCTGCGCTGCTACACGCAGAACATAGATACCCTGGAGCGAATAGCCGG GCTGGAACAGGAGGACTTGGTGGAGGCGCACGGCACCTTCTACACACTCACACTGCGTCAGCGCCAGCTGCCGGCA CGAATACCCGCTAAGCTGGATGAAAGAGAAGATCTTCTCTGAGGTGACGCCCAAGTGTGAAGACTGTCAGAGCCT GGTGAAGCCTGATATCGTCTTTTTTGGTGAGAGCCTCCCAGCGGGTTTCTTCTCCTGTATGCAGTCAGACTTCCT GAAGGTGGACCTCCTCGTGCTCATGGGTACCTCCTTGCAGGTGCAGCCCTTTGCCTCCTCATCAGCAAGGCACC CCTCTCCACCCCTCGCCTCATCAACAAGGAGAAAGCTGGCCAGTCGGACCCTTTCCTGGGGATGATTATGGG CTGCCTGGCCCTTGCTGAGCTCCTTGGATGGAAGAAGGAGCTGGAGGACCTTGTCCGGAGGAGCACGCCAGCAT AGATGCCCAGTCGGGGGGGGGGTCCCCAACCCCAGCACTTCAGCTTCCCCCAAGAAGTCCCCGCCACCTGCCAA $\tt GGACGAGGCCAGGACAACAGAGGGGAGAAACCCCAG{\color{red}{\textbf{TGA}}} CAGCTGCATCTCCCAGGCGGGATGCCGAGCTCCTC$ AGGGACAGCTGAGCCCCAACCGGGCCTGGCCCCTCTTAACCAGCAGTTCTTGTCTGGGGAGCTCAGAACATCCC CCAATCTCTTACAGCTCCCCCAAAACTGGGGTCCCAGCAACCCTGGCCCCCAACCCCAGCAAATCTCTAACA CCTCCTAGAGGCCAAGGCTTAAACAGGCATCTCTACCAGCCCCACTGTCTCTAACCACTCCTGGGCTAAGGAGTA ACCTCCCTCATCTCTAACTGCCCCCACGGGGCCAGGGCTACCCCAGAACTTTTAACTCTTCCAGGACAGGGAGCT TCGGGCCCCCACTCTGTCTCCTGCCCCCGGGGGCCTGTGGCTAAGTAAACCATACCTAACCTACCCCAGTGTGGG TGTGGGCCTCTGAATATAACCCACACCCAGCGTAGGGGGAGTCTGAGCCGGGAGGGCTCCCGAGTCTCTGCCTTC AGCTCCCAAAGTGGGTGGTGGGCCCCCTTCACGTGGGACCCACTTCCCATGCTGGATGGGCAGAAGACATTGCTT

5873/6881 FIGURE 5412

MDFLRNLFSQTLSLGSQKERLLDELTLEGVARYMQSERCRRVICLVGAGISTSAGIPDFRSPSTGLYDNLEKYHL PYPEAIFEISYFKKHPEPFFALAKELYPGQFKPTICHYFMRLLKDKGLLLRCYTQNIDTLERIAGLEQEDLVEAH GTFYTSHCVSASCRHEYPLSWMKEKIFSEVTPKCEDCQSLVKPDIVFFGESLPARFFSCMQSDFLKVDLLLVMGT SLQVQPFASLISKAPLSTPRLLINKEKAGQSDPFLGMIMGLGGGMDFDSKKAYRDVAWLGECDQGCLALAELLGW KKELEDLVRREHASIDAQSGAGVPNPSTSASPKKSPPPAKDEARTTEREKPQ

5874/6881 FIGURE 5413

TGAAGAGGCGGGACACAGACGACGATTGGGCGACGAAGGACTCTATCGCGGTCAACTTTCCTCAGGATCTGATTG GCTCGTCACGGTCAGGTTCGCTGCCTTGCAATTGGTCTAAACGCGGAGTGGGCGGACGAAGTGCCGCCTTGTCC CCGGTCCAAG<u>ATCGCTGCGTCCATGGCGCGCGCTTGTGGCCTTTGCTGACTCGTCGGGGGTTCCGGCCCCGGGG</u> AGGCTGCATCTCCAACGATAGTCCAAGGAGAAGTTTCACTACAGAGAAACGAAACCGGAACCTCCTGTACGAGTA TGCGCGCGAGGGCTACAGCGCACTCCCTCAGCTGGACATAGAGCGGTTCTGCGCATGCCCAGAAGAGGCCGCACA CGCCCTGGAGCTCCGCAAGGGGGAGCTGCGCTCGGCGGACCTGCCCGCGATCATCTCGACATGGCAGGAGCTGAG GCAGCTGCAGGAGCAGATCCGGAGCCTGGAGGAAGAGAGCCAGCTGTGACTGAGGCAGTGCGGGCCCTGCTGGC $\verb|AAACCAGGACAGTGGTGAAGTGCAGGACCCCAAGTACCAGGGTCTGCGGGCACGTGGCCGGGAGATCCGGAA|$ GGAGCTTGTTCACCTGTACCCCAGGGAGGCCCAGCTTGAGGAGCAGTTCTACCTGCAGGCGCTGAAGCTGCCCAA CCAGACCCACCCAGACGTCCCGTCGGGGATGAGAGCCAGGCTCGAGTGCTCCACATGGTCCGGAGACAAGCCAGT TTTCTCCTTCCAACCTCGGGGCCACCTGGAAATTGGCGAGAAACTCGACATCATCCGTCAGAAGCGCCTGTCCCA CGTGTCTGGCCACCGGTCCTATTACCTGCGCGGGGCTGGAGCCCTCCTGCAGCACGGCCTGGTCAACTTCACATT CAACAAGCTTCTCCGCCGGGGCTTCACCCCCATGACGGTGCCAGACCTTCTCCGCGGAGCAGTGTTTGAAGGCTG TGGGATGACACCAAATGCCAACCCATCCCAAATTTACAACATCGACCCTGCCCGCTTCAAAGATCTCAACCTGGC TGGAACAGCGGAGGTGGGGCTTGCAGGCTACTTCATGGACCACCGTGGCCTTCAGGGACCTGCCAGTCAGGAT GGTTTGCTCCAGCACCTGCTACCGGGCAGAGACAAACACGGGACAGGAACCCCGGGGGCTGTATCGAGTACACCA CTTCACCAAGGTGGAGATGTTTGGGGTGACAGGCCCTGGGCTGGAGCAGAGCTCACAGCTGCTGGAGGAGTTCCT CCTCCCGCCTACCGCAAGTTTGACATTGAGGCCTGGATGCCAGGCCGAGGCCGCTTTGGAGAGGTCACCAGTGC ${\tt TTCCAACTGCACAGACTTCCAGAGCCGCCCCCCACATCATGTTCCAGACCGAGGCTGGGGAGCTGCAGTTTGC}$ CCACACGGTGAACGCCACCGCCTGTGCTGTCCCCCGCCTTCTCATCGCGCTCCTGGAGAGTAACCAGCAGAAGGA CGGCTCAGTGCTCCTGCCCTCCAGTCCTACCTCGGCACTGATCGGATCACAGCCCCTACCCACGTGCC CCACAGCAGCCCTCGGGGGTGTCACTGCTTCCTGGAGTTCAGGAGACCCCGGACACCTGGGACCTGTGTTGCTGA GCCCGTCCTGACATCTGTGTTCTTCCTGTCAGCTCCACGCCCGGGCCCCTGGACCACGGGGTCCACCTCTCCTCT GTCCTTGCTGCCTCAGAGTCAGTCACTGACCCTGTTATCATTGAGGGTCCCAGTGGGAAGCAGGACGTCTGGGCT

5875/6881 FIGURE 5414

MAASMARRLWPLLTRRGFRPRGGCISNDSPRRSFTTEKRNRNLLYEYAREGYSALPQLDIERFCACPEEAAHALE LRKGELRSADLPAIISTWQELRQLQEQIRSLEEEKAAVTEAVRALLANQDSGEVQQDPKYQGLRARGREIRKELV HLYPREAQLEEQFYLQALKLPNQTHPDVPVGDESQARVLHMVGDKPVFSFQPRGHLEIGEKLDIIRQKRLSHVSG HRSYYLRGAGALLQHGLVNFTFNKLLRRGFTPMTVPDLLRGAVFEGCGMTPNANPSQIYNIDPARFKDLNLAGTA EVGLAGYFMDHTVAFRDLPVRMVCSSTCYRAETNTGQEPRGLYRVHHFTKVEMFGVTGPGLEQSSQLLEEFLSLQ MEILTELGLHFRVLDMPTQELGLPAYRKFDIEAWMPGRGRFGEVTSASNCTDFQSRRLHIMFQTEAGELQFAHTV NATACAVPRLLIALLESNQQKDGSVLVPPALQSYLGTDRITAPTHVPLQYIGPNQPRKPGLPGQPAVS

5876/6881 FIGURE 5415

5877/6881 FIGURE 5416

5878/6881 FIGURE 5417

5879/6881 FIGURE 5418

5880/6881 FIGURE 5419

GGGGAGCTTGCGGCACAGCTAGGGCATCCCGGCGAGGAGCGCCCAGGCCCCACAGCCGGGCCTGGCGG GGGGACCATGGGCCCTCGGTCTCCAGGGGCCGGCCCGCGCTCCCCGCGCCGGAGCCGGAACCCGAAGAGGC GCTGGACCTGAGCCAACTACCCCCAGAGCTGCTTCTGGTGGTGCTGAGCCACGTCCCCCGCGCACGCTGCTCGG GCGCTGCCGCCAAGTGTGCCGGGGCTGGCGAGCCCTGGTGGACGGCCAGGCCCTGTGGCTGATCCTGGCCCG TTGCCCCCTGGGCCGCTTCTGCGCGCGCAGACCCATCGGACGCAACCTTATTCGCAACCCCTGCGGCCAAGAAGG CCTCCGAAAGTGGATGGTGCAACACGGTGGGGACGGCTGGGTGGTGGAGAAAACAGGACAACCGTGCCTGGGGC TCTGTGGCCAGAACTGCTGGATAGTGGCAGGATTGAGATTTGTGTCTCTGACTGGTGGGGAGCCCGACACGACAG CGGCTGTATGTACAGACTCCTCGTCCAACTTCTAGACGCCAACCAGACTGTTCTAGATAAATTCTCTGCTGTGCC TGATCCCATCCCGCAGTGGAACAACAATGCCTGCCTTCACGTCACCCACGTGTTCTCCAACATCAAGATGGGCGT CCGCTTTGTGTCTTTCGAACACCGGGGCCAGGACACACTCTGGGCTGGCCACTATGGAGCCCGTGTGACCAA CTCCAGTGTGATCGTGCGAGTCCGTCTGTCCTAGTCCAGCACTACCCTTCTTGCAAGACAGCCTGACTGTGCCTT TCCTGGGTCCAATCAAAGGCCCTGACGGGCCCTGTCTTCAGGTTCTAGAAACTACCAGAAGAAGCTTCTTCCATC TTATCTACCTACTGCAGCTGCTTCTCGGGGGGGCCCTACTGTACTGAGGGGAAACCCACAAGTGAGCATGGG CAGGCCCCTCTGTACCATCCCCTCCCCTCCGCACCACTGACCTCTTGTCTCCTGTTGTTTCTGCCACAGGGACTT CCTTGGTCCCTTCAGGGAAGCCCTCAACTCATCTCTGAACTTAGAATCTCATCCTTAGGGCTCAGAGAGTCCCAG CCCTAAGGGTGTGAACCTCACCTCCTGGGGCTTCCGAGCTACAGGGCTGGGACCAGGTCATGCAGCTGAAAGTCT ACGTTAAAAAAAAAGTTTGGGCCAGGCACAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCA GGCGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATCCA AAAAATTAGCCGGGCTTGGTGGTGTGCACCTGTAATTCCAGCTACTCGGGAGGCTGAGGCAGGAGAATTGCTTGA GCCCGGGAGGCAGAGGCTGCAGTGAACCAAGATCATGCCACTCCAGCCTGGGCAACACACGCGAGACTCCG TCTCAAAAAGAAAAGTTTGGATCAGGCAGGGTGGCTCACACCTGTAATCCCTGCACTTTGGGAGGCCAAGGTGG GAGGATCAGTTGAGCCCCAGAGTTCAAGACCAGCCTGGGCAATGTAGTAAGACCCCCATCGCTACAAAAAATACA AAAGTTAGCCAGGTACAGTAGTACACACCTGTAGTCCAAGCTACTTGGGAGGCTGAAGTGGGAGGATCATTTGTG CCCAGGTTGAGGCTATAGTGAGCCATGATCATACCACTGCACTCCAGCCTGGGTGACAGAGCGAGACCCTGTCTC AAAAAAAAAAAAAGAATTTGGAGATGGTTCTGCCCACTCTGGTTTCTCTGAAAAAACGAGGTAATTCCCTGAGCCC AACCCTGATCCTCAAGGACCTGTAATTGTGTGTGTATTTAAAATTAAAATAACATTATTTTTATTTTTGACTTTTTT TCAAACAGTAAGAATAATATCAGCAGCATGTATCTGCCAATCATATGTAATAAATTTCTTATTTTGCC

5881/6881 FIGURE 5420

MGASVSRGRAARVPAPEPEPEEALDLSQLPPELLLVVLSHVPPRTLLGRCRQVCRGWRALVDGQALWLLILARDH GATGRALLHLARSCQSPARNARPCPLGRFCARRPIGRNLIRNPCGQEGLRKWMVQHGGDGWVVEENRTTVPGAPS QTCFVTSFSWCCKKQVLDLEEEGLWPELLDSGRIEICVSDWWGARHDSGCMYRLLVQLLDANQTVLDKFSAVPDPIPQWNNNACLHVTHVFSNIKMGVRFVSFEHRGQDTQFWAGHYGARVTNSSVIVRVRLS

5882/6881 FIGURE 5421

GTCGAGCAGTTAGGCCGCGAGCGACTGCGGCCCGAGCCGATGAGTAACCCGAAGCCCCTAGAGGAGTGGTCACC TGCCTGAGGGCACTTCTGTCCCACCAGCATCAGACCAGGCCGCACCGAGTCCCCGGCACCATGTTTGGGAAGAGG AAGAAGCGGGTGGAGATCTCCGCGCCGTCCAACTTCGAGCACCGCGTGCACACGGGCTTCGACCAGCACGAGCAG AAGTTCACGGGGCTGCCCGCCAGTGGCAGAGCCTGATCGAGGAGTCGGCTCGCCGGCCCAAGCCCCTCGTCGAC CCCGCCTGCATCACCTCCATCCAGCCCGGGCCCCCAAGACCATCGTGCGGGGCAGCAAAGGTGCCAAAGATGGG GCCCTCACGCTGCTGCTGGACGAGTTTGAGAACATGTCGGTGACACGCTCCAACTCCCTGCGGAGAGACAGCCCG CCGCCGCCCGTGCCCGCAGGAAAATGGGATGCCAGAGGAGCCGGCCACCACGGCCAGAGGGGGCCCAGGG CCAGAGAAGAGCCCAAGTCTTCCAGGGAGGGCTCAGGGGGTCCCCAGGAGTCCTCCCGGGACAAACGCCCCCTC AACACCTACCGAGGGCTGACACGGACCACCCATCCGGGGTGCCCAGGGGGAGCCTCATGACGTGGCCCCTAAC GGGCCATCAGCGGGGGGCCTGGCCATCCCCAGTCCTCCTCCTCCTCCTCCCGGCCTCCCACCCGAGCCCGAGGT CCTGCTGTTCCTGGGCCCCCTGGCCCCCGCTCACCACGGGGAGCCACAGCGAGTATCCCATGAGCAGTTCCGG GCTGCCCTGCAGCTGGTGGTGGACCCAGGCGACCCCCGCTCCTACCTGGACAACTTCATCAAGATTGGCGAGGGC TCCACGGGCATCGTGTGCATCGCCACCGTGCGCAGCTCGGGCAAGCTGGTGGCCGTCAAGAAGATGGACCTGCGC AAGCAGCAGAGGCGCGAGCTGCTCTTCAACGAGGTGGTAATCATGAGGGACTACCAGCACGAGAATGTGGTGGAG ATGTACAACAGCTACCTGGTGGGGGACGAGCTCTGGGTGGTCATGGAGTTCCTGGAAGGAGGGCGCCCTCACCGAC ATCGTCACCCACACCAGGATGAACGAGGAGCAGATCGCGGCCGTGTGCCTTGCAGTGCTGCAGGCCCTGTCGGTG CTCCACGCCCAGGGCGTCATCCACCGGGACATCAAGAGCGACTCGATCCTGCTGACCCATGATGGCAGGGTGAAG TGGATGGCCCCAGAGCTCATCTCCCGCCTTCCCTACGGGCCAGAGGTAGACATCTGGTCGCTGGGGATAATGGTG ATTGAGATGGTGGACGGAGAGCCCCCCTACTTCAACGAGCCACCCCTCAAAGCCATGAAGATGATTCGGGACAAC CTGCCACCCGACTGAAGAACCTGCACAAGGTGTCGCCATCCCTGAAGGGCTTCCTGGACCGCCTGCTGGTGCGA ATCGTGCCCTCATGCGCCAGAACCGCACCAGATGAGGCCCAGCGCCCTTCCCCTCAACCAAAGAGCCCCCCGGG TCACCCCGCCCCACTGAGGCCAGTAGGGGGCCAGGCCTCCCACTCCTCCCAGCCCGGGAGATGCTCCGCGTGGC ACCACCTCCTTGCTGGGGGTAGATGAGACCCTACTACTGAACTCCAGTTTTGATCTCGTGACTTTTAGAAAAAC TCTCCAGGAAGGCAGCGCCCTCCCATCACTGGAAGTCTGCAGTGGGGGTCGCTGGGGGTGGAGAACACTAA TCCTCCAGCCCGCAAGGGGTGTCTGGCGCCCTTGCCTGACACCCAGCCCCCTCTCCCCCTGAGCCATTGTGGGGGT CGATCATGAATGTCCGAAGAGTGGCCTTTTCCCGTAGCCCTGCGCCCCCTTTCTGTGGCTGGATGGGGAGACAGG TCAGGGCCCCCACCTCTCCAGCCCTGCAGCAAATGACTACTGCACCTGGACAGCCTCCTCTTTTCTAGAAGT CTATTTATATTGTCATTTTATAACACTCTAGCCCCTGCCCTTATTGGGGGACAGATGGTCCCTGTCCTGCGGGGT

5883/6881 FIGURE 5422

MFGKRKKRVEISAPSNFEHRVHTGFDQHEQKFTGLPRQWQSLIEESARRPKPLVDPACITSIQPGAPKTIVRGSK GAKDGALTLLLDEFENMSVTRSNSLRRDSPPPPARARQENGMPEEPATTARGGPGKAGSRGRFAGHSEAGGGSGD RRRAGPEKRPKSSREGSGGPQESSRDKRPLSGPDVGTPQPAGLASGAKLAAGRPFNTYPRADTDHPSRGAQGEPH DVAPNGPSAGGLAIPQSSSSSSRPPTRARGAPSPGVLGPHASEPQLAPPACTPAAPAVPGPPGPRSPQREPQRVS HEQFRAALQLVVDPGDPRSYLDNFIKIGEGSTGIVCIATVRSSGKLVAVKKMDLRKQQRRELLFNEVVIMRDYQH ENVVEMYNSYLVGDELWVVMEFLEGGALTDIVTHTRMNEEQIAAVCLAVLQALSVLHAQGVIHRDIKSDSILLTH DGRVKLSDFGFCAQVSKEVPRKKSLVGTPYWMAPELISRLPYGPEVDIWSLGIMVIEMVDGEPPYFNEPPLKAMK MIRDNLPPRLKNLHKVSPSLKGFLDRLLVRDPAQRATAAELLKHPFLAKAGPPASIVPLMRQNRTR

5884/6881 FIGURE 5423

 $\tt TCGCCCGCCCACCTCATCTCAACCCACTTTCCGCGGGGGGCGCCCAAGCTGGGCCTTCCTCGGATCAGGCGTC$ CCCTGAAGTCGGCACGCCCTCTGCGTCCCCCTTCGGTCCCGCTAGGACCCCGTCCGGGCTGCCGTCGCCTCGTC GCTATGCCGCCCACCATCCAGACCCAGGCCCAGCGGAGGATGGCCACAGGCCCAATTCCCACCGGACTCTGCCT GAGAGGTCTGGAGTGGTCTGCCGAGTCAAGTACTGCAATAGCCTCCCTGATATCCCCTTCGACCCCAAGTTCATC ACCTACCCCTTCGACCAGAACAGGTTCGTCCAGTACAAAGCCACTTCCTTGGAGAAACAGCACAAACATGACCTC CTGACTGAGCCAGACCTGGGGGTCACCATCGATCTCATCAATCCTGACACCTACCGCATCGACCCCAATGTTCTT CTAGATCCAGCTGATGAGAAACTTTTGGAAGAGGAGATTCAGGCCCCCACCAGCTCCAAGAGATCCCAGCAGCAC GCGAAGGTGGTGCCATGGATGCGAAAGACAGAGTACATCTCCACTGAGTTCAACCGTTATGGCATCTCCAATGAG AAGCCTGAGGTCAAGATTGGGGTTTCTGTGAAGCAGCAGTTTACCGAGGAAGAATATACAAAGACAGGGATAGC ACACCGGTGGAGGTCATGCCTGTCTTCCCAGACTTTAAGATGTGGATCAATCCATGTGCTCAGGTGATCTTTGAC TCAGACCCAGCCCCCAAGGACACGAGTGGTGCAGCTGCGTTGGAGATGATGTCTCAGGCCATGATTAGGGGCATG CAGGAGGAGAGATGACTATGCACCAGATGATGTGTATGACTACAAAATTGCTCGGGAGTACAACTGGAACGTG AAGAACAAAGCTAGCAAGGGCTATGAGGAAAACTACTTCTTCATCTTCCGAGAGGGTGACGGGGTTTACTACAAT GTGGTCAAACATCGGGACATGAATGAGAAGGAACTGGAAGCTCAGGAGGCACGGAAGGCCCAGCTAGAAAACCAC AAGGGCAGCAGCAGTGAGAAGGAGGGCAGTGAAGATGAGCACTCGGGCAGCGAGAGTGAACGGGAGGAAGGTGAC AGGGACGAGGCCAGTGACAAGAGTGGCAGTGGTGAGGACGAGAGCAGCGAGGATGAGGCCCGGGCTGCCCGTGAC AAAGAGGAGATCTTTGGCAGTGATGCTGATTCTGAGGACGATGCCGACTCTGATGATGAGGACAGAGGACAGGCC CAAGGTGGCAGTGACAATGATTCAGACAGCGGCAGCAATGGGGGTGGCCAGCCGGAGCCGCAGCCGCAGC GCCAGTCCCTTCCCCAGTGGCAGCAGCACTCGGCCCAGGAGGATGGCAGTGAAGCTGCAGCTTCTGATTCCAGT GAAGCTGATAGTGACAGTGACTGAGTCCCAGGGCATTCAGGGCTGGTTCAGACACCATTATTGTGAGCAGCAAAG CAACTTCTCTTTA

5885/6881 FIGURE 5424

MAPTIQTQAQREDGHRPNSHRTLPERSGVVCRVKYCNSLPDIPFDPKFITYPFDQNRFVQYKATSLEKQHKHDLL
TEPDLGVTIDLINPDTYRIDPNVLLDPADEKLLEEEIQAPTSSKRSQQHÄKVVPWMRKTEYISTEFNRYGISNEK
PEVKIGVSVKQQFTEEEIYKDRDSQITAIEKTFEDAQKSISQHYSKPRVTPVEVMPVFPDFKMWINPCAQVIFDS
DPAPKDTSGAAALEMMSQAMIRGMMDEEGNQFVAYFLPVEETLKKRKRDQEEEMDYAPDDVYDYKIAREYNWNVK
NKASKGYEENYFFIFREGDGVYYNELETRVRLSKRRAKAGVQSGTNALLVVKHRDMNEKELEAQEARKAQLENHE
PEEEEEEEMETEEKEAGGSDEEQEKGSSSEKEGSEDEHSGSESEREEGDRDEASDKSGSGEDESSEDEARAARDK
EEIFGSDADSEDDADSDDEDRGQAQGGSDNDSDSGSNGGGQRSRSHSRSASPFPSGSEHSAQEDGSEAAASDSSE
ADSDSD

5886/6881 FIGURE **5425**

5887/6881 FIGURE 5426

5888/6881 FIGURE 5427

MPSKGPLQSVQVFGRKKTATAVAHCKRGNGLIKVNGRPLEMIEPRTLQYKLLEPVLLLGKERFAGVDIRVRVKGG GHVAQIYAIRQSISKALVAYYQKYVDEASKKEIKDILIQYDRTLLVADPRRCESKKFGGPGARARYQKSYR

5889/6881 FIGURE 5428A

AGAGAACAGATTCGGAAACTGGGGAGGTCTAGCATGTGGCGTAGGAGGGGGTCCTCACTCCGCTTCGCGATTGCC AAAACGAGCCTGCCGGAAGCGCCCTAAGGGGTTTTCTTCTCCCAGGGAACCAGCGGGGAAACTGAGGCTCGGGGT GGAGCGCAGGATTGTGGGACGCCCAAGACTGCTGTCTTTCCCAGCAGCAGCGGAAGATGTCGGACAGCGAGGAC AGCAACTTTTCCGAGGAGGAGGACAGCGGCGCAGCAGTGACGGCGAGGAGGCCGAGGTAGACGAAGAGCGGCGG GAAGAGGAGGAAGAAGATGATGACCGACCCCCAAGAAACCCCGCCATGGAGGCTTCATTCTGGACGAGGCTGAT GCCTCCAATATCGATAATGTTGTCCTGGATGAAGATCGTTCTGGGGCTCGCCCCCCCAAAACCTCTGGAGGGAC CAGCGAGAAGAAGAACTGGGCGAGTATTACATGAAGAAATACGCCAAGTCATCTGTGGGAGAGACGGTGTATGGA GGATCTGATGAGCTCTCAGACGACATCACCCAGCAGCAGCTGCTCCCAGGAGTCAAGGATCCCAATCTGTGGACT GTCAAATGTAAGATTGGGGAGGAACGGGCCACGGCCATTTCCTTGATGCGCAAGTTCATTGCCTACCAGTTCACA GACACGCCCTGCAGATCAAGTCAGTAGTGGCACCAGAGCATGTGAAGGGCTACATCTACGTGGAGGCCTACAAG CAGACCCACGTGAAGCAGGCCATTGAGGGGGTGGGCAACCTGCGGCTTGGCTACTGGAACCAGCAGATGGTGCCC ATCAAGGAGATGACAGACGTGCTCAAAGTGGTGAAGGAGGTGGCCAACCTGAAACCAAAGTCCTGGGTCCGCCTC ATGATCCCACGCATCGACTACGATCGCATCAAGGCCCGCATGAGCTTGAAAGACTGGTTTGCCAAAAGGAAGAAG TTTAAGCGGCCTCCACAGAGGCTGTTTGATGCTGAGAAGATCAGGTCCCTGGGGGGTGATGTTGCCTCTGATGGT GACTTCCTCATCTTTGAGGGGAACCGTTACAGCCGGAAGGGCTTTCTGTTCAAGAGCTTCGCCATGTCTGCTGTG GTGGTGACTGAGAGCACAGGGAAGGAGCGGGAGCACAACTTCCAACCTGGGGACAACGTGGAGGTCTGTGAGGGT GAGCTCATCAACCTGCAGGGCAAGATCCTCAGCGTGGATGGCAACAAGATCACCATCATGCCCAAGCATGAGGAC CTCAAGGACATGTTGGAGTTCCCAGCCCAGGAACTTAGAAAATACTTCAAGATGGGGGACCACGTGAAGGTGATT GCTGGCCGATTCGAGGGCGACACAGGCCTCATTGTGCGGGTGGAGGAGAATTTCGTTATCCTGTTCTCTGACCTC ACCATGCATGAGCTGAAGGTGCTCCCCCGGGACCTGCAGCTCTGCTCAGAGACAGCATCAGGTGTGGATGTTGGG GGCCAGCATGAATGGGGCGAGCTGGTGCAGCTGGATCCCCAGACTGTGGGTGTCATCGTGCGACTAGAACGGGAG ACCTTCCAGGTGCTGAACATGTACGGGAAGGTGGTGACTGTCAGACATCAGGCTGTGACCCCGGAAGAAGGACAAC CGCTTTGCTGTGGCCTTGGACTCAGAGCAGAACAACATCCATGTGAAAGACATCGTTAAGGTCATTGATGGCCCC CACTCAGGCCGAGAAGGGGAGATTCGCCATCTCTTCCGAAGCTTCGCCTTCCTACATTGCAAGAAACTGGTGGAG TTCACCGTGGGTGGCTTTGCGCCTATGAGTCCCCGGATCAGCAGCCCCATGCACCCCAGTGCTGGAGGTCAGCGT GGCGGCTTTGGTAGCCCAGGTGGCGGCAGTGGTGGCATGAGCAGGGGCCGGGGCCGGAGGGACAACGAACTCATC GGCCAGACCGTGCGCATCTCCCAGGGGCCCTACAAAGGCTACATCGGTGTGAAAGATGCCACAGAGTCCACG GCCGTGTGGAGCTGCACTCCACCTGCCAGACCATCTCTGTGGACCGTCAGCGGCTCACCACGGTGGGCTCACGG CGCCCGGGCGCATGACCTCGACCTATGGGAGGACGCCCATGTATGGCTCCCAGACGCCCATGTATGGCTCTGGC TCCCGAACACCCATGTACGGCTCACAGACACCCCTCCAGGATGGTAGCCGCACCCCACACTACGGCTCACAGACG CCCCTGCATGATGGCAGCCGCACTCCTGCCCAGAGTGGGGCCCTGGGACCCCCAACAACCCCAACACCGCCGTCACGG GCTGAGGAAGAATATGAGTATGCTTTCGATGATGAGCCCACCCCGTCCCCGCAGGCCTATGGGGGAACCCCCAAT CCCCAAACACCTGGCTACCCAGACCCCTCGTCCCCACAGGTCAACCCACAATACAACCCGCAGACGCCAGGGACG CCGGCCATGTACAACACAGACCAGTTCTCTCCCTATGCTGCCCCCTCCCCACAAGGTTCCTACCAGCCCAGCCCC CCTACACCGTCGCCCATGGCCTATCAGGCTAGCCCCAGCCCGAGCCCCGTTGGCTACAGTCCTATGACACCTGGA GCTCCCTCCCTGGTGGCTACAACCCACACACGCCAGGCTCAGGCATCGAGCAGAACTCCAGCGACTGGGTAACC GTCACGGGGGGCATGTGCTCTGTGTACCTGAAGGACAGTGAGAAGGTTGTCAGCATTTCCAGTGAGCACCTGGAG CCTATCACCCCACCAGAACAACAAGGTGAAAGTGATCCTGGGCGAGGATCGGGAAGCCACGGGCGTCCTACTG AGCATTGATGGTGAGGATGGCATTGTCCGTATGGACCTTGATGAGCAGCTCAAGATCCTCAACCTCCGCTTCCTG TGGCCCTTGGCTGTGACACAAGATCCTCCTGCAGGGCTAGGCGGATTGTTCTGGATTTCCTTTTGTTTTTCCTTT

5890/6881 FIGURE 5428B

5891/6881 FIGURE **5429**

MSDSEDSNFSEEEDSERSSDGEEAEVDEERRSAAGSEKEEEPEDEEEEEEEYDEEEEEEDDDRPPKKPRHGGF
ILDEADVDDEYEDEDQWEDGAEDILEKEEIEASNIDNVVLDEDRSGARRLQNLWRDQREEELGEYYMKKYAKSSV
GETVYGGSDELSDDITQQQLLPGVKDPNLWTVKCKIGEERATAISLMRKFIAYQFTDTPLQIKSVVAPEHVKGYI
YVEAYKQTHVKQAIEGVGNLRLGYWNQQMVPIKEMTDVLKVVKEVANLKPKSWVRLKRGIYKDDIAQVDYVEPSQ
NTISLKMIPRIDYDRIKARMSLKDWFAKRKKFKRPPQRLFDAEKIRSLGGDVASDGDFLIFEGNRYSRKGFLFKS
FAMSAVITEGVKPTLSELEKFEDQPEGIDLEVVTESTGKEREHNFQPGDNVEVCEGELINLQGKILSVDGNKITI
MPKHEDLKDMLEFPAQELRKYFKMGDHVKVIAGRFEGDTGLIVRVEENFVILFSDLTMHELKVLPRDLQLCSETA
SGVDVGGQHEWGELVQLDPQTVGVIVRLERETFQVLNMYGKVVTVRHQAVTRKKDNRFAVALDSEQNNIHVKDIV
KVIDGPHSGREGEIRHLFRSFAFLHCKKLVENGGMFVCKTRHLVLAGGSKPRDVTNFTVGGFAPMSPRISSPMHP
SAGGQRGGFGSPGGGSGGMSRGRGRRDNELIGQTVRISQGPYKGYIGVVKDATESTARVELHSTCQTISVDRQRL
TTVGSRRPGGMTSTYGRTPMYGSQTPMYGSGSRTPMYGSQTPLQDGSRTPHYGSQTPLHDGSRTPAQSGAWDPNN
PNTPSRAEEEYEYAFDDEPTPSPQAYGGTPNPQTPGYPDPSSPQVNPQYNPQTPGTPAMYNTDQFSPYAAPSPQG
SYQPSPSPQSYHQVAPSPAGYQNTHSPASYHPTPSPMAYQASPSPSPVGYSPMTPGAPSPGGYNPHTPGSGIEQN
SSDWVTTDIQVKVRDTYLDTQVVGQTGVIRSVTGGMCSVYLKDSEKVVSISSEHLEPITPTKNNKVKVILGEDRE
ATGVLLSIDGEDGIVRMDLDEQLKILNLRFLGKLLEA

5892/6881 FIGURE **5430**

GTTTCTGTGTCTTTTCTCTTCCAAAGTCTCTCGTTCCACCTAACGAGAAACACCCCACAGGTGTGGAGGGGCAAC CCATCCCTTCAGACAATTGGGAGGTGAGGGCCGATTGCCTTACACGGTGAGACAAGCGGCCTGACTCGTGACTAT TTTTTTGGACAAATCAGGCAGCCACTGACTCCCTTCATTATCGCCCTCAGCTTTATCTCTGGGCAATAAGTGTGAT GAATCCCAGTTGTCGCCCCAGGGTCAGCCAGGAGACTAGTCAGAAGCAAACGCGCCTGCGGCAATCCGCCCGAT GCCTTTGGTCTCTCGGGCTTCCGTCCACCCGCCCTCCCCCGCGTTTCCATTGGCTGTAGCTCCGGCCCGGGG CGGGCGAAGAGGGAGCGAGTGGGCGGGCCGCGTGGCGTCAGCGCAAGATGGCGGCCTCGGCAGCGGTGTTCTCG CGCTTGCGAAGCGGGCTCCGGCTCGCCGGGGACTGTGCACGAGGTTGGCGACGCCGCCCCCCCGGGCCCCA GATCAGGCCGCAGAGATCGGGAGCCGCGGGAGCACTAAGGCGCAAGGGCCACAGCAGCAGCCGGGCTCAGAGGGT CCCAGCTATGCCAAAAAAGTTGCGCTCTGGCTTGCTGGGCTGCTTGGAGCTGGTGGGACTGTGAGCGTCGTCTAT ATCTTTGGAAACAACCCGGTGGACGAAAATGGTGCCAAGATTCCTGATGAGTTCGACAATGATCCAATTCTGGTA CAGCAGTTGCGCCGGACATACAAATATTTCAAAGATTATAGACAGATGATCATCGAGCCCACCACCACCCTTGCCTT CTCCCAGACCCTCTGCAGGAACCGTACTACCAGCCACCCTACACGCTCGTTTTGGAGCTCACCGGCGTCCTCTTG CATCCTGAGTGGTCGCTGGCCACTGGCTGGAGGTTTAAGAAGCGCCCAGGCATCGAGACCTTGTTCCAGCAGCTT GCCCCTTTATATGAAATTGTCATCTTTACGTCAGAGACTGGCATGACTGCGTTTCCACTCATTGATAGTGTGGAC ACCATTGCACTGAATGGTGTGGAGGACGTGCGAACCGTGCTGGAGCACTATGCCCTGGAGGATGACCCGCTGGCG GCTTTCAAACAGCGGCAAAGCCGGCTAGAGCAGGAGGAGCAGCGCCTGGCCGAGCTCTCCAAGTCCAACAAG CAGAACCTCTTCCTTGGCTCCCTCACCAGCCGCTTGTGGCCTCGCTCCAAACAGCCCTGAACTCTGGGCCTCCTC AAACTCAGTGCCTGGGTCCAGGGCCCCAGTGCTTCCAGACCAAGACTTGGGCCACCACTTGTCCAATAAAGTACA TCCCAGACGCCACACCTGCTGTGTCCCGAGAGTCTCCAGATGGGGGCATCAGGGTGAGGTCCGGGACTCTTGGGT CATCGTCCCACAGTGGCTGATCGGCTGCCAAGCACAGTGGGGGGTGCTTTGTTGGATCAGAGCAGATTTTTCACCC TGGTCTCGGAATCTAAAAACCCTCGCTGTGTCTTCCTGTGTGTTGCGTGATCTGTGAAAAAATACATCTCCCTCTG ACCACAGACTCCTCATCTGTGGAGAAGGGAAGAGAGATGGCACTTGGCTTTAAAGACAGGTAGCTGCCAGGCTA CTGTGGAGAGAATGTGTTATGGGCCTAGTGGGCCTCTGGTGGACCAGAGATTACCCCTCTCAACAGGCCAGCTGC TGGTTGGCTCCAGCCAGTGTGGCCCTGGGGTAAAGGGGGCCTGGAGTTGCTTGACACGCCAGTTGTTCAAA

5893/6881 FIGURE **5431**

MASALSLGNKCDPFLRCVLCRGGGALQGPRGRGPDDFESQLSPPGSARRLVRSKRACGNPPDAFGLSRASVHPPL PRVSIGCSSGPGRAKRERVGGAAWRQRKMAASAAVFSRLRSGLRLGSRGLCTRLATPPRRAPDQAAEIGSRGSTK AQGPQQQPGSEGPSYAKKVALWLAGLLGAGGTVSVVYIFGNNPVDENGAKIPDEFDNDPILVQQLRRTYKYFKDY RQMIIEPTSPCLLPDPLQEPYYQPPYTLVLELTGVLLHPEWSLATGWRFKKRPGIETLFQQLAPLYEIVIFTSET GMTAFPLIDSVDPHGFISYRLFRDATRYMDGHHVKDISCLNRDPARVVVVDCKKEAFRLQPYNGVALRPWDGNSD DRVLLDLSAFLKTIALNGVEDVRTVLEHYALEDDPLAAFKQRQSRLEQEEQQRLAELSKSNKQNLFLGSLTSRLW PRSKQP

5894/6881 FIGURE 5432

GAAGGCCATGTCTCCCCACGGATGTCCGGGCTCCTCTCCCAGACTGTGATCCTAGCGCTCATTTTCCTCCCCCA GACACGGCCCGCTGGCGTCTTCGAGCTGCAGATCCACTCTTTCGGGCCGGGTCCAGGCCCTGGGGCCCCGCGGTC CCCCTGCAGCGCCCGGCTCCCCTGCCGCCTCTTCTCAGAGTCTGCCTGAAGCCTGGGCTCTCAGAGGAGGCCGC CGAGTCCCCGTGCGCCCTGGGCGCGCTGAGTGCGCGCGGACCGGTCTACACCGAGCAGCCCGGAGCGCCCGC GCCTGATCTCCCACTGCCCGACGGGCTCTTGCAGGTGCCCTTCCGGGACGCCTGGCCTGGCACCTTCTCTTTCAT CATCGAAACCTGGAGAGAGGAGTTAGGAGACCAGATTGGAGGGCCCGCCTGGAGCCTGCTGGCGCGCGTGGCTGG CAGGCGGCGCTTGGCAGCCGGAGGCCCGTGGGCCCGGGACATTCAGCGCGCAGGCGCCTGGGAGCTGCGCTTCTC GTACCGCGCGCGCGCGCCCTGCCGTCGGGACCGCGTGCACGCCCTCTGCCGTCCGCGCAGCGCCCCCTC GCGGTGCGGTCCGGGACTGCGCCCCTGCGCACCGCTCGAGGACGAATGTGAGGCGCCGCTGGTGTGCCGAGCAGG CTGCAGCCCTGAGCATGCCTTCTGTGAACAGCCCGGTGAATGCCGATGCCTAGAGGGCTGGACTGGACCCCTCTG CACGGTCCCTGTCTCCACCAGCAGCTGCCTCAGCCCCAGGGGCCCGTCCTCTGCTACCACCGGATGCCTTGTCCC TGGGCCTGGGCCCTGTGACGGGAACCCGTGTGCCAATGGAGGCAGCTGTAGTGAGACACCCAGGTCCTTTGAATG CACCTGCCGGGTGGGTTCTACGGGCTGCGGTGTGAGGTGAGCGGGGTGACATGTGCAGATGGACCCTGCTTCAA CGGCGGCTTGTGTGTCGGGGGTGCAGACCCTGACTCTGCCTACATCTGCCACTGCCCACCTGGTTTCCAAGGCTC CAACTGTGAGAAGAGGGTGGACCGGTGCAGCCTGCAGCCATGCCGCAATGGCGGACTCTGCCTGGACCTGGGCCA CGCCCTGCGCTGCCGCCGCCGGCTTCGCGGGTCCTCGCTGCGAGCACCTGGACGACTGCGCGGGCCG CCGCGACTGCCGCGAGCGCGGACCCGTGCGCCGCGCGCCCCTGTGCTCACGGCGGCCGCTGCTACGCCCACTT CTCCGGCCTCGTCTGCGCTTGCGCTCCCGGCTACATGGGAGCGCGGTGTGAGTTCCCAGTGCACCCCGACGGCGC AAGCGCCTTGCCCGCGGCCCCGGGCCTCAGGCCCGGGGACCCTCAGCGCTACCTTTTGCCTCCGGCTCTGGG ACTGCTCGTGGCCGCGGCGTGCCGCTGCGCTCTTGCTGGTCCACGTGCCCCCGTGGCCACTCCCAGGA TGCTGGGTCTCGCTTGCTGGCACCCCGGAGCCGTCAGTCCACGCACTCCCGGATGCACTCAACAACCTAAG GACGCAGGAGGGTTCCGGGGATGGTCCGAGCTCGTCCGTAGATTGGAATCGCCCTGAAGATGTAGACCCTCAAGG GATTTATGTCATATCTGCTCCTTCCATCTACGCTCGGGAGGTAGCGACGCCCCTTTTCCCCCCGCTACACACTGG GCGCGCTGGGCAGAGCACCTGCTTTTTCCCTACCCTTCCTCGATTCTGTCCGTGAAATGAATTGGGTAGAG GCTACCTGCCATCTTCTCTTT

5895/6881 FIGURE **5433**

MVSPRMSGLLSQTVILALIFLPQTRPAGVFELQIHSFGPGPGPGAPRSPCSARLPCRLFFRVCLKPGLSEEAAES
PCALGAALSARGPVYTEQPGAPAPDLPLPDGLLQVPFRDAWPGTFSFIIETWREELGDQIGGPAWSLLARVAGRR
RLAAGGPWARDIQRAGAWELRFSYRARCEPPAVGTACTRLCRPRSAPSRCGPGLRPCAPLEDECEAPLVCRAGCS
PEHGFCEQPGECRCLEGWTGPLCTVPVSTSSCLSPRGPSSATTGCLVPGPGPCDGNPCANGGSCSETPRSFECTC
PRGFYGLRCEVSGVTCADGPCFNGGLCVGGADPDSAYICHCPPGFQGSNCEKRVDRCSLQPCRNGGLCLDLGHAL
RCRCRAGFAGPRCEHDLDDCAGRACANGGTCVEGGGAHRCSCALGFGGRDCRERADPCAARPCAHGGRCYAHFSG
LVCACAPGYMGARCEFPVHPDGASALPAAPPGLRPGDPQRYLLPPALGLLVAAGVAGAALLLVHVRRRGHSQDAG
SRLLAGTPEPSVHALPDALNNLRTQEGSGDGPSSSVDWNRPEDVDPQGIYVISAPSIYAREVATPLFPPLHTGRA
GQRQHLLFPYPSSILSVK

5896/6881 FIGURE **5434**

AATCGGGGCCCTGGCTTGCCGCTCCGCCGGATACCCTCAGCCAGTGGGCAGGTCTGAGCTCCGGGCTCCCCGAGC AGTTTGAGTCCCCTTGCCCGCTCCTTCAGGTCTCAGCGGCGGTGGCAGCCGAGGTGCAGGATGCAAGAAGGCGCC CCCCGGCCGGGCTCCCGCTCCAGGCCTCCCCTGCGGCCCTCTGAGCCCACCATGGCCGACCGCGCCA TGGTCCCTTCTCTGGCTTCCCAGGGCCCCAGGAGCACACGCAGGTATTGCCTGATGTGCGGCTACTGCCTCGGAG GCTGCCCTGGCCTTCCGGGATGCAACCTCAGCCCCGCTGCGTAAGCTCTCTGTGGACCTCATCAAGACCTACAA GCACATCAATGAGGTATACTATGCGAAGAAGAAGCGGCGGCCCAGCAGCCCCCCAGGATTCGAGCAACAA GAAGGAGAAGAAGGTCCTGAACCATGGTTATGATGACGACAACCATGACTACATCGTGCGAGTGGCGAGCGCTG GCTGGAGCGCTACGAAATTGACTCGCTCATTGGCAAAGGCTCCTTTGGCCAGGTGGTGAAAGCCTATGATCATCA GACCCAGGAGCTTGTGGCCATCAAGATCATCAAGAACAAAAAGGCTTTCCTGAACCAGGCCCAGATTGAGCTGCG GCTGCTGGAGCTGATGAACCAGCATGACACGGAGATGAAGTACTATATAGTACACCTGAAGCGGCACTTCATGTT CCGGAACCACCTGTGCCTGGTATTTGAGCTGCTGTCCTACAACCTGTACGACCTCCTGCGCAACACCCACTTCCG CGGCGTCTCGCTGAACCTGACCCGGAAGCTGGCGCAGCAGCTCTGCACGGCACTGCTCTTTCTGGCCACGCCTGA GCTCAGCATCATTCACTGCGACCTCAAGCCCGAAAACATCTTGCTGTGCAACCCCAAGCGCAGCGCCATCAAGAT TGTGGACTTCGGCAGCTCCTGCCAGCTTGGCCAGAGGATCTACCAGTATATCCAGAGCCGCTTCTACCGCTCACC TGAGGTGCTCCTGGGCACACCCTACGACCTGGCCATTGACATGTGGTCCCTGGGCTGCATCCTTGTGGAGATGCA CACCGGAGAGCCCCTCTTCAGTGGCTCCAATGAGGTCGACCAGATGAACCGCATTGTGGAGGTGCTGGGCATCCC ${\tt ACCGGCCGCCATGCTGGACCAGGCCCCCAAGGCTCGCAAGTACTTTGAACGGCTGCCTGGGGGTGGCTGGACCCT}$ ACGAAGGACGAAAGAACTCAGGAAGGATTACCAGGGCCCCGGGACACGGCGCTGCAGGAGGTGCTGGGCGTGCA GGTGCTGCGCATGCTGGAGTATGAGCCCGCCGCCCCCCCTGGGGGGCTCTGCAGCACGGCTTCTTCCG CTGCCCTCTTCCAGCACCGCCAGCTCCATCTCCAGTTCTGGAGGCTCCAGTGGCTCCTCCAGTGACAACCGGAC CTACCGCTACAGCAACCGATATTGTGGGGGCCCCTGGGCCCCCTATCACAGACTGTGAGATGAACAGCCCCCAGGT CCCACCTCCCAGCGGTGCGGCCCTGGGCAGGGGGTGATGTGCCCCACAAGACACATCAAGCCCCTGCCTCTGC CTCGTCACTGCCTGGGACCGGGGCCCAGTTACCCCCCCAGCCCCGATACCTTGGTCGTCCCCCATCACCAACCTC ACCACCACCCCGGAGCTGATGGATGTGAGCCTGGTGGGCGCCCTGCTGACTCCCCACCTCACCCAGCGCC TGCCCCCAGCACCCGGCTGCCTCAGCCCTCCGGACTCGGATGACTGGAGGTCGTCCACCCCTCCCGCCTCCTGA CCCCTCCTGGGGCCCTCTGAAGCCATACCTCCCCCATCTGGGGGCCCTGGGCTCCCATCTCATCTCTCT CCTTGACTGGAATTGCTGCTACCCAGCTGGGGTGGGTGAGGCCTGCACTGATTGGGGCCTGGGGCAGGGGGGTCA AGGAGAGGGTTTTGGCCGCTCCCCACTAAGGACTGGACCCTTGGGCCCCTCTCCCCCTTTTTTTCTATTTA TTGTACCAAAGACAGTGGTGGTCGGTGGAGGGAAGACCCCCCCTCACCCCAGGACCCTAGGAGGGGGTGGGGGC AGGTAGGGGGAGATGGCCTTGCTCCTCGCTGTACCCCCAGTAAAGAGCTTTCTCACAAAAAA

5897/6881 FIGURE 5435

MAVPPGHGPFSGFPGPQEHTQVLPDVRLLPRRLPLAFRDATSAPLRKLSVDLIKTYKHINEVYYAKKKRRAQQAP
PQDSSNKKEKKVLNHGYDDDNHDYIVRSGERWLERYEIDSLIGKGSFGQVVKAYDHQTQELVAIKIIKNKKAFLN
QAQIELRLLELMNQHDTEMKYYIVHLKRHFMFRNHLCLVFELLSYNLYDLLRNTHFRGVSLNLTRKLAQQLCTAL
LFLATPELSIIHCDLKPENILLCNPKRSAIKIVDFGSSCQLGQRIYQYIQSRFYRSPEVLLGTPYDLAIDMWSLG
CILVEMHTGEPLFSGSNEVDQMNRIVEVLGIPPAAMLDQAPKARKYFERLPGGGWTLRRTKELRKDYQGPGTRRL
QEVLGVQTGGPGGRRAGEPGHSPADYLRFQDLVLRMLEYEPAARISPLGALQHGFFRRTADEATNTGPAGSSAST
SPAPLDTCPSSSTASSISSSGGSSGSSGSNRTYRYSNRYCGGPGPPITDCEMNSPQVPPSQPLRPWAGGDVPHKT
HQAPASASSLPGTGAQLPPQPRYLGRPPSPTSPPPPELMDVSLVGGPADCSPPHPAPAPQHPAASALRTRMTGGR
PPLPPPDDPATLGPHLGLRGVPQSTAASS

5898/6881 FIGURE 5436

GGATCCGGCAACGAAGGTACCATGGCCGGACTCCGGAGCCGCACAAACCAGGGCTCGCC<u>ATG</u>AAGCCAGGATTCA GTCCCGTGGGGGTGGCTTTGGCGGCCGAGGGGGCTTTGGTGACCGTGGTGGTCGTGGAGGCCGAGGGGGCTTTG GCGGGGGCCGAGGTCGAGGCGGAGGCTTTAGAGGTCGTGGACGAGGAGGAGGTGGAGGCGGCGGCGGCGGTGGAG GAGGAGGAAGAGGTGGTGGAGGCTTCCATTCTGGTGGCAACCGGGGTCGTGGTCGGGGAAGAAAAGAGAAAAACC AGTCGGGGAAGAATGTGATGGTGGAGCCGCATCGGCATGAGGTGTCTTCATTTGTCGAGGAAAGGAAGATGCAC AAATTGAGTACCGAGCCTGGAACCCCTTCCGCTCCAAGCTAGCAGCAGCAATCCTGGGTGGTGGGACCAGATCC ACATCAAACCGGGGGCTAAGGTTCTCTACCTCGGGGCTGCCTCGGGCACCACGGTCTCCCATGTCTCTGACATCG TTGGTCCGGATGGTCTAGTCTATGCAGTCGAGTTCTCCCACCGCTCTGGCCGTGACCTCATTAACTTGGCCAAGA AGAGGACCAACATCATTCCTGTGATCGAGGATGCTCGACACCCACACAAATACCGCATGCTCATCGCAATGGTGG ATGTGATCTTTGCTGATGTGGCCCAGCCAGACCAGACCCGGATTGTGGCCCTGAATGCCCACACCTTCCTGCGTA ATGGAGGACACTTTGTGATTTCCATTAAGGCCAACTGCATTGACTCCACAGCCTCAGCCGAGGCCGTGTTTGCCT CCGAAGTGAAAAAGATGCAACAGGAGAACATGAAGCCGCAGGAGCAGTTGACCCTTGAGCCATATGAAAGAGACC AAAAAAAAA

5899/6881 FIGURE 5437

CAACGGGGGCATCCACTACATCACCCTTGATGGCCGTGTCTACGACCTGCATGGCTCCTGCTCCTATGTCTTGGC CCAAGTCTGCCACCCAAAGCCTGGGGACGAGGACTTTTCCATCGTGCTTGAGAAGAATGCAGCTGGAGATCTCCA ACGCCTCCTGGTTACTGTGGCCAGGTTGTGAGCCTAGCTCAGGGGCAGCAGGTCACCGTGGACGCCGAGGC TGTGGCCCTGCCTGTGGCCTGTGGGCCGCTGCGGGTGACCGCCGAGGGCCGAAACATGGTTCTGCAGACGACCAA GGGGCTGCGGCTTCTCTTTGATGGCGATGCCCACCTCCTCATGTCCATCCCCAGCCCCTTCCGTGGACGGCTCTG TGGCCTCTGTGGGAACTTCAATGGCAACTGGAGTGACGACTTTGTCCTGCCCAATGGCTCAGCAGCGTCCAGTGT GGAGACCTTCGGGGCTGCATGGCGGGCCCCGGCTCCTCCAAGGGCTGTGGCGAGGGCTGCGGGCCCCAAGGCTG CCCAGTGTGCTTGGCAGAGAGACTGCACCCTATGAGAGCAACGAGGCCTGCGGGCAGCTCCGGAACCCCCAGGG CCCCTTCGCGACCTGCCAGGCGGTGCTGAGTCCCTCTGAGTACTTCCGCCAATGCGTATACGACCTGTGCGCGCA AAAGGGTGACAAAGCCTTCCTGTGCCGCAGCCTGCAGCCTACACGGCGGCCTGTCAGGCAGCTGGCGTGGCCGT GAAGCCCTGGAGGACAGACAGCTTCTGCCCGCTCCATTGCCCCGCCCACAGCCACTACTCCATCTGCACTCGCAC ${\tt CGACCGCTTCCTGCTTTCCCAGGGTGTCTGCATCCCTGTCCAAGATTGTGGCTGCACCCATAATGGCCGATACTT}$ CCAGGCAGCTGGCTGCCCACCAGGCCGTGTATGTGAGGTCAAGGCTGAAGCCCGGAACTGCTGGGCCACCCGTGG TCTCTGTGTCCTGTCTGTGGGGGCCCAACCTCACCACCTTTGATGGGGCCCGTGGTGCCACCACCTCTCCTGGTGT $\tt CTATGAGCTCTTCCCGCTGCCCAGGACTACAGAATACCATCCCCTGGTACCGTGTAGTTGCCGAAGTCCAGAT$ CTGCCATGGCAAAACGGAGGCTGTGGGCCAGGTCCACATCTTCTTCCAGGATGGGATGGTGACGTTGACTCCAAA CAAGGGTGTGTGGGTGAATGGTCTCCGAGTGGATCTCCCAGCTGAGAAGTTAGCATCTGTGTCCGTGAGTCGTAC ACCTGATGGCTCCCTGCTAGTCCGCCAGAAGGCAGGGGTCCAGGTGTGGCTTGGAGCCAATGGGAAGGTGGCTGT GATTGTCAGCAATGACCATGCTGGGAAACTGTGTGGGGCCTGTGGAAACTTTGACGGGGACCAGACCAATGATTG GCATGACTCCCAGGAGAAGCCAGCGATGGAGAAATGGAGAGCGCAGGACTTCTCCCCATGTTATGGCTGATCAGT CATCCACCAGGAACGAAGATTTCCTGAAGAAGACCTGGTCCCTCTGGAGGTTGCAGTGGCTGAAGGATGCATCAT Т

5901/6881 FIGURE 5439

GTCAACTTAGTGTACAATGCTGTCAGATGAACCTTACCCTTGTAAGGCTTGTAACTTGGTTCCTCCCTTTCTTAA GCCCTTATTGGCTATCTTCTTCTTTTAATATTTTAAAGTTTTTAATCTTTAAATTTTTAATCTTTAAACCATGCT TGTTTAACCTGCTGGTAAAATTCACGTCTTTCAGACTGTAATGCTTTCATGCCAAGTAAATGGTCTTGCCAGGCT TCCAGCCTGTTTCAGAGACCACTAGCCCAGAGCCGTATCAGCCCCTTCAGCAAGCCATAAGAAATTTCTACTCCT CCTGGAAATAGATGTAGAGACTATGTCCATGCTTAGCAGGAAGTAGTTCCAGAAGAGACCTTTGCTCCTTAAGAA CATGTGGAATCCCAATGCCGGGCAGCCAGGGCCAAATCCATATCCCCCCAATATTGGGTGCCCTGGAGGTTCCAA TCCTGCCCACCCACCTATTAATCCACCCTTTCCCCCAGGCCCCTGTCCTCCCCCAGGAGCTCCCCATGG CAATCCAGCTTTCCCCCAGGTGGGCCCCCTCATCCTGTGCCACAGCCAGGGTATCCAGGATGCCAACCGTTGGG TCCCTACCCTCCATACCCACCGCCTGCCCCTGGAATCCCTCTGTGAATCCCTTGGCTCCTGGCATGGTTGG ACCAGCAGTGATAGTGGACAAGAAGATGCAGAAGAAAATGAAGAAAGCTCATAAAAAGATGCACAAGCACCAAAA ACAGGCCCTGGACCCTTCCCTCAAGTCCCACCAGTTCTGCTCTCCCATCAAGCTTCAGATGCCACGTTGTACTGG GGGAATGTAGCCCTTGTGCTCCCCACCCCTACCTCCACCTGAGCCCTGACCCTGCTGTTGAGCCCTGAGTGGCTA GGGGAAATAGGAAGAGGATTGCCATGGCCTGGCCATCTTGTTGCTGCTTGGAGAGATCATATAGCTAATGAATTA GGCAGGGGAGCTATTTTTTGAAGATGATGAACTAAATGTTGAAGACAAGTTTGAGATCTGTAAAATGTGATTTTT TACTTCCACTTATAATACTTGTGATTGGGGAGGTTTGTGGAAATTCAATTATGATGAAAAACCTCTATCTTTTTT AAGGTTGCTGGGAAGTAGAGTCCATTTGGTTGATGAGCTTTGACTGCGGTTTTTGGAACCTTACCTCTCCTTA GCCCAATATGCTGTCTCGGGTCCTATTCAAATAAAGTTATTTCTCCTGGTCT

5902/6881 FIGURE 5440

5903/6881 FIGURE 5441

CGGCCCAGACCGGCCTGTCCTTCCTGGGCCCTGAGCCTGAGGACCTGGAGGACCTGTACAGCCGCTACAAGAAG CTGCAGCAAGAGCTGGAGTTCCTGGAGGTGCAGGAGAATACATCAAAGATGAGCAAAAGAACCTGAAAAAGGAA TTTCTCCATGCCCAGGAGGAGGTGAAGCGAATCCAAAGCATCCCGCTGGTCATCGGACAATTTCTGGAGGCTGTG GAGCTGCTCAAGCCCAACGCCTCAGTGGCCCTCCACAAGCACAGCAATGCACTGGTGGACGTGCTGCCCCCGAA GCCGACAGCATCATGATGCTCACCTCAGACCAGAAGCCAGATGTGATGTACGCGGACATCGGAGGCATGGAC ATCCAGAAGCAGGAGGTGCGGAGGCCGTGGAGCTCCCGCTCACGCATTTCGAGCTCTACAAGCAGATCGGCATC GATCCCCCCGAGGCGTCCTCATGTATGGCCCACCTGGCTGTGGGAAGACCATGTTGGCAAAGGCGGTGGCACAT CACACAACAGCTGCATTCATCCGGGTCGTGGGCTCGGAGTTTGTACAGAAGTATCTGGGTGAGGGCCCCCGCATG GTCCGGGATGTGTTCCGCCTGGCCAAGGAGAATGCACCTGCCATCATCTTCATAGACGAGATTGATGCCATCGCC ACCAAGAGATTCGATGCTCAGACAGGGGCCGACAGGGAGGTTCAGAGGATCCTGCTGGAGCTGCTGAATCAGATG GATGGATTTGATCAGAATGTCAATGTCAAGGTAATCATGGCCACAAACAGAGCAGACACCCTGGATCCGGCCCTG ACTATCACTAGCAAGATGAACCTCTCTGAGGAGGTTGACTTGGAAGACTATGTGGCCCGGCCAGATAAGATTTCA GGAGCTGATATCAACTCCATCTGTCAGGAGAGTGGAATGTTGGCTGTCCGTGAAAACCGCTACATTGTCCTGGCC AAGGACTTCGAGAAAGCATACAAGACTGTCATCAAGAAGGACGAGCAGGAGCATGAGTTTTACAAG**TGA**CCCTTC $\verb|CCTTCCTCCACCACCACCACCTCAGGGGCTGGGGCTTCTCTCGCACCCCCAGCACCTCTGTCCCAAAACCTCATTC| \\$

5904/6881 FIGURE 5442

MEEIGILVEKAQDEIPALSVSRPQTGLSFLGPEPEDLEDLYSRYKKLQQELEFLEVQEEYIKDEQKNLKKEFLHA QEEVKRIQSIPLVIGQFLEAVDQNTAIVGSTTGSNYYVRILSTIDRELLKPNASVALHKHSNALVDVLPPEADSS IMMLTSDQKPDVMYADIGGMDIQKQEVREAVELPLTHFELYKQIGIDPPRGVLMYGPPGCGKTMLAKAVAHHTTA AFIRVVGSEFVQKYLGEGPRMVRDVFRLAKENAPAIIFIDEIDAIATKRFDAQTGADREVQRILLELLNQMDGFD QNVNVKVIMATNRADTLDPALLRPGRLDRKIEFPLPDRRQKRLIFSTITSKMNLSEEVDLEDYVARPDKISGADI NSICQESGMLAVRENRYIVLAKDFEKAYKTVIKKDEQEHEFYK

5905/6881 FIGURE 5443

ACTGTGCCCTGTCCACGGTGCCTCCTGCATGTCCTGCTGCCCTGAGCTGTCCCGAGCTAGGTGACAGCGTACCAC AGGCCACGGTACTTCCTGCTGAAGAGCGACGGCTCCTTCATTGGGTACAAGGAGAGGCCCCGAGGCCCCTGATCAG ACTCTACCCCCTTAAACAACTTCTCCGTAGCAGAATGCCAGCTGATGAAGACCGAGAGGCCGCGACCCAACACC TTTGTCATACGCTGCCTGCAGTGGACCACAGTCATCGAGAGGACCTTCCACGTGGATTCTCCAGACGACGAGAGGAG GAGTGGATGCGGGCCATCCAGATGGTCGCCAACAGCCTCAAGCAGCGGGCCCCAGGCGAGGACCCCATGGACTAC AAGTGTGGCTCCCCAGTGACTCCTCCACGACTGAGGAGATGGAAGTGGCGGTCAGCAAGGCACGGGCTAAAGTG ACCATGAATGACTTCGACTATCTCAAACTCCTTGGCAAGGGAACCTTTGGCAAAGTCATCCTGGTGCGGGAGAAG GTCACCGAGAGCCGGGTCCTCCAGAACACCAGGCACCCGTTCCTCACTGCGCTGAAGTATGCCTTCCAGACCCAC GACCGCCTGTGCTTTGTGATGGAGTATGCCAACGGGGGTGAGCTGTTCTTCCACCTGTCCCGGGAGCGTGTCTTC ACAGAGGAGCGGGCCCGGTTTTATGGTGCAGAGATTGTCTCGGCTCTTGAGTACTTGCACTCGCGGGACGTGGTA TACCGCGACATCAAGCTGGAAAACCTCATGCTGGACAAAGATGGCCACATCAAGATCACTGACTTTGGCCTCTGC AAAGAGGCATCAGTGACGGGCCACCATGAAAACCTTCTGTGGGACCCCGGAGTACCTGGCGCCTGAGGTGCTG GAGGACAATGACTATGGCCGGGCCGTGGACTGGTGGGGGGCTGGGTGTGGTCATGTACGAGATGATGTGCGGCCGC $\verb|CTGCCCTTCTACAACCAGGACCACGAGCGCCTCTTCGAGCTCATCCTCATGGAAGAGATCCGCTTCCCGCGCACG|\\$ AGCGATGCCAAGGAGGTCATGGAGCACAGGTTCTTCCTCAGCATCAACTGGCAGGACGTGGTCCAGAAGAAGCTC CTGCCACCCTTCAAACCTCAGGTCACGTCCGAGGTCGACACAAGGTACTTCGATGATGAATTTACCGCCCAGTCC ATCACAATCACACCCCTGACCGCTATGACAGCCTGGGCTTACTGGAGCTGGACCAGCGGACCCACTTCCCCCAG GGGTGGTTTTTTCCCCCT

CTCTTTATAATTTAGTTTCCATAGAAGTTATATGTGCATTTAAAAAAATTCAATGCTGGAGCGACCGTGTCTGGG GTAGCAGCAGACGCCTGAGAGCCGAGGCCCCTCAGGGTTTGGAGACCCTGACACCCCACCTTCTCACCT GGGCTCTGCGTATCCCCCAGCCTTGAGGGAAGATGAAGCCTAAACTGATGTACCAGGAGCTGAAGGTGCCTGCAG TGCTGGTCCTCATTCTGGCGGTTGTGGGCTTCGGAGCCCTGATGACTCAGCTGTTTCTATGGGAATACGGCGACT TGCATCTCTTTGGGCCCAACCAGCGCCCAGCCCCTGCTATGACCCTTGCGAAGCAGTGCTGGTGGAAAGCATTC GTGCGCACAGCCTGGACATCGCCTCCTTCTACTGGACCCTCACCAACAATGACACCCACACGCAGGAGCCCT CTGCCCAGCAGGGTGAGGAGGTCCTCCGGCAGCTGCAGACCCTGGCACCAAAGGGCGTGAACGTCCGCATCGCTG TGAGCAAGCCCAGCGGGCCCACAGGCGGACCTGCAGGCTCTGCTGCAGAGCGGTGCCCAGGTCCGCATGG TGGACATGCAGAAGCTGACCCATGGCGTCCTGCATACCAAGTTCTGGGTGGTGGACCAGACCCACTTCTACCTGG GCAGTGCCAACATGGACTGGCGTTCACTGACCCAGGTCAAGGAGCTGGGCGTGGTCATGTACAACTGCAGCTGCC GGCCCCGGTTCTATGACACCCGCTACAACCAAGAGACACCAATGGAGATCTGCCTCAATGGAACCCCTGCTCTGG CCTACCTGGCGAGTGCGCCCCCACCCCTGTGTCCAAGTGGCCGCACTCCAGACCTGAAGGCTCTACTCAACGTGG TGGACAATGCCCGGAGTTTCATCTACGTCGCTGTCATGAACTACCTGCCCACTCTGGAGTTCTCCCACCCTCACA GGTTCTGGCCTGCCATTGACGATGGGCTGCGGCGGGCCACCTACGAGCGTGGCGTCAAGGTGCGCCTGCTCATCA ACTCTGACATCCAGGTGAAACTCTTTGTGGTCCCCGCGGATGAGGCCCAGGCTCGAATCCCATATGCCCGTGTCA ACCACAACAAGTACATGGTGACTGAACGCGCCACCTACATCGGAACCTCCAACTGGTCTGGCAACTACTTCACGG AGACGGCGGGCACCTCGCTGGTGACGCAGAATGGGAGGGCGGCCTGCGGAGCCAGCTGGAGGCCATTTTCC TGAGGGACTGGGACTCCCTTACAGCCATGACCTTGACACCTCAGCTGACAGCGTGGGCAACGCCTGCCGCCTGC TCTGAGGCCCGATCCAGTGGGCAGGCCAAGGCCTGCTGGGCCCCCGCGGACCCAGGTGCTCTGGGTCACGGTCCC TGTCCCCGCGCCCCCGCTTCTGTCTCCCCCATTGTGGCTCCTCAGGCTCTCTCCCCTGCTCTCCCACCTCTACCT GGGTGCATGCTGGCCCTGGCCCACCCCCACTTTCCAGGGCAAAAAGGGCCCAGGGTTATAATAAGTA AATAACTTGTCTGT

5907/6881 FIGURE 5445

GCACACCCGGAAGTGGGTGCGGCCAGCCGGCTCGCCCGGGGGCCATGGCAGCGGCTACTGCAGCCGAGGGG GTCCCCAGTCGGGGGCCTCCCGGGGAAGTCATTCATCTGAATGTGGGAGGCAAGAGATTCAGTACCTCTCGCCAG ACTCTCACCTGGATCCCAGACTCCTTCTCCCAGTCTTCTGAGCGGACGCATCTCGACGCTGAAAGATGAGACC GGAGCAATCTTCATCGATCAGGGACCATTACAGTCTTCGCCCACCCGTCACTCTACGTCTTGCGCATCACAAAGA GTTGGATCCCAGGGGTGTCCACGGTTCCAGCCTCCTCCATGAAGCCCAGTTCTATGGGCTCACTCCTCTGGTTCG TCGCCTGCAGCTTCGAGAGGAGTTGGATCGATCTTCTTGTGGAAACGTCCTCTTCAATGGTTACCTGCCGCCACC AGTGTTCCCAGTGAAGCGGCGGAACCGGCACAGCCTAGTGGGGCCTCAGCAGCTAGGAGGACGGCCAGCCCCTGT CCGACGGAGCAACACGATGCCCCCCAACCTTGGCAATGCAGGGCTGCTGGGCCGAATGCTGGATGAGAAAACCCC TCCCTCACCCTCAGGACAACCTGAGGAGCCGGGGATGGTGCGCCTGGTGTGTGGACACCATAATTGGATCGCTGT CCTGGACTGGCCCATCGAACGACTGGCGCTCACAGCCCGGGTGCATGGTGGGGCTTTGGGTGAACATGACAAGAT GGTGGCAGCAGCCACCGGCAGCAGATCCTGCTATGGGCTCTGCAGGCGGAAGGCGGTGGCTCCGAGATAGGGGT CTTTCATCTGGGGGTGCCTGTGGAGGCCTTGTTCTTCGTCGGGAACCAGCTCATTGCTACAAGCCACACAGGGCG CATCGGGGTGTGGAATGCCGTCACCAAGCACTGGCAGGTCCAGGAGGTGCAGCCCATCACCAGTTATGACGCGGC AGGCTCCTTCCTCCTCGGGCTGCAACAACGGCTCCATTTACTACGTGGATGTGCAGAAGTTCCCCTTGCGCAT GAAAGACAACGACCTCCTTGTCAGCGAGCTCTATCGGGACCCAGCGGAGGATGGGGTCACCGCCCTCAGTGTCTA CCTCACCCCAAGACCAGTGACAGTGGGAACTGGATCGAGATCGCCTATGGCACCAGCTCAGGGGGCGTGCGGGT CATCGTGCAGCACCCGGAGACTGTGGGCTCGGGGCCTCAGCTCTTCCAGACCTTCACTGTGCACCGCAGCCCTGT CACCAAGATCATGCTGTCGGAGAAGCACCTCATCTCAGTCTGTGCCGACAACAACCACGTGCGGACATGGTCTGT GACTCGCTTCCGCGGCATGATTTCCACCCAGCCCGGCTCCACCCCACTCGCTTCCTTTAAGATCCTGGCTCTGGA GTCGGCAGATGGCCATGGCGGCTGCAGTGCTGGCAATGACATTGGCCCCTACGGTGAGCGGGACGACCAGCAAGT GTTCATCCAGAAGGTGGTGCCCAGTGCCAGCCAGCTCTTCGTGCGTCTCTCATCTACTGGGCAGCGGGTGTGCTC CGTGCGCTCCGTGGACGGCTCACCCACGACAGCCTTCACAGTGCTGGAGTGCGAGGGCTCCCGGCGGCTCGGCTC TCGGCCCCGGCGCTACCTGCTCACTGGCCAGGCCAACGGCAGCTTGGCCATGTGGGACCTAACCACCGCCATGGA CGGCCTCGGCCAGGCCCTGCAGGTGGCCTGACGGAGCAAGAGCTGATGGAACAGCTGGAACACTGTGAGCTGGC CCCGCCGGCTCCTTCAGCTCCCTCATGGGGCTGTCTCCCCAGCCCCTCACCCGCATCTCCCTCACCAGCCTCCA CTCAGCCTCCAGCAACACCTCCTTGTCTGGCCACCGTGGGAGCCCAAGCCCCCGCAGGCTGAGGCCCGGCGCCC AGCCCCGTGGCCCTCCAGCGGTCTCGGCACTCCCTCACACCTCCCAAGATGAAGCTCAATGAAACTTCCTTTTG AACAACGCAGCTGCCATGATGCCTTGGGATGCCCTGGTCCTGGGGGGACTCAGGTGCCTCCCTGATTCCTGTGGGA ACCCCGGGTTCAGGGCCAGGGCCTCCTTGGAATAAATGGTTATTGTTACTAGGTCCCCACCTTCCCTCTTTTCTG GAAGCCAAAGTCACCCTCCCCAATAAAGTCCTCACTGCC

5908/6881 FIGURE 5446A

CGTTGCTGTTTGTCGCTGCCCGGGCCAGACGTCTAGGAGGAGCCGCTGCATCCGAGTCCCTGGCTGTCTCCG AAGCCTTCTGCAGGGTCCGAAGCTGCCAGCCCAAAAAGTGTGCAGGCCCCCAGCGGTGCCTGAACCCAGTGCCTG CAGTGCCCAGTCCCAGCCCCAGCGTGAGGAAGAGACAGGTGTCCCTCAACTGGCAGCCACTGACGCTCCAGGAGG GTGCCCCGCTGGCAAGGCCCCGGTCCTGTGTCCCTTGATCTGTCACAATGGCGGTGTGTGCGTGAAGCCTGACC GCTGCCTCTGTCCCCGGACTTCGCTGCAAGTTCTGCCAGTTGCACTCCTCGGGCGCCCCGGCCCCGGCCCCGG CTGTACCAGGCCTCACCCGCTCCGTGTACACTATGCCACTGGCCAACCACCGCGACGACGACGACGACGGCGTGGCAT CTATGGTGAGCGTCCACGTGGAGCACCCGCAGGAGGCGTCGGTGGTGCACCAGGTGGAGCGTGTGTCTGGCC _ CGGTGTTGGCACAGAGCGCCGCGGGAGGACGGCTACTCAGATGCCTCGGGCTTCGGTTACTGCTTTCGGGAGC TGCGCGGAGGCGAATGCGCGTCCCGGCTCCCGGGCTCCGGACGCAGGAGGTCTGCTGCCGAGGGGCCGGCTTGG CCTGGGGCGTTCACGACTGTCAGCTGTGCTCCGAGCGCCCTGGGGAACTCCGAAAGAGTGAGCGCCCCAGATGGAC GCAGCAGCTGCATCTCCCAACACGTGATCTCAGAGGCCCAAAGGGCCCTGCTTCCGCGTGCTCCGCGACGGCGGCT GTTCGCTGCCCATTCTGCGGAACATCACTAAACAGATCTGCTGCTGCAGCCGCGTAGGCAAGGCCTGGGGCCGGG GCTGCCAGCTCTGCCCACCCTTCGGCTCAGAGGGTTTCCGGGAGATCTGCCCGGCTGGTCCTGGTTACCACTACT GTCCCTCCTCCGGCATGTGTCAGCGCAACCCCCAGGTCTGCGGCCCAGGACGCTGCATTTCCCGGCCCAGCGGCT ACACCTGCGCTTGCGACTCTGGCTTCCGGCTCAGCCCCAGGGCACCCGATGCATTGATGTGGACGAATGTCGCC GCGTGCCCCGCCCTGTGCTCCCGGGCGCTGCGAGAACTCACCAGGCAGCTTCCGCTGCGTGTGCGGCCCGGGCT TCCGAGCCGGCCCACGGGCTGCGGAATGCCTGGATGTGGACGAGTGCCACCGCGTGCCGCCGCGTGTGACCTCG GGCGCTGCGAGAACACGCCAGGCAGCTTCCTGTGCGTGTGCCCCGCCGGGTACCAGGCTGCACCGCACGGAGCCA CTTTCCGCTGTGTTTGCCCGGCTGGCTTCCGGGGCTCGGCGTGTGAAGAGGATGTGGATGAGTGTGCCCAGGAGC GTGAGAACACAGAAGGCAGCTTCCAGTGTGTCTGCCCCATGGGCTTCCAACCCCAACACTGCTGGCTCCGAGTGCG AGGATGTGGATGAGTACCACCTCGCATGCCCTGGGCAGGAGTGTGTGAACTCGCCCGGCTCCTTCCAGT GCAGGACCTGTCCTTCTGGCCACCACCTGCACCGTGGCAGATGCACTGATGTGGACGAATGCAGTTCGGGTGCCC CTCCCTGTGGTCCCCACGGCCACTGCACTAACACCGAAGGCTCCTTCCGCTGCAGCTGCGCGCCCAGGCTACCGGG CGCCGTCGGCCCGGGCCCTGCGCAGACGTGAACGAGTGCCTGGAGGGCGATTTCTGCTTCCCTCACGGCG AGTGCCTCAACACTGACGGCTCCTTTGCCTGTACTTGTGCCCCTGGCTACCGACCCGGACCCCGCGGAGCCTCTT GCCTCGACGTTGACGAGTGCAGCGAGGAGGACCTTTGCCAGAGCGGCATCTGTACCAACACCGACGGCTCCTTCG AGTGCATCTGTCCTCCGGGACACCGCGCTGGCCCGGACCTCGCCTCCTGCCTCGACGTGGACGAATGTCGCGAGC GAGGCCCAGCCCTGTGCGGGTCGCAGCGCTGTGAGAACTCTCCCGGCTCCTACCGCTGTGTCCGGGACTGCGATC CTGGGTACCACGCGGGCCCCGAGGGCACCTGTGACGATGTGGATGAGTGCCAAGAATATGGTCCCGAGATTTGTG GAGCCCAGCGTTGTGAGAACACCCCTGGCTCCTACCGCTGCACACCAGCCTGTGACCCTGGCTATCAGCCCACGC CAGGGGGGGGATGCCAGGATGTGAACGAGTGTGAAACACTACAGGGTGTATGTGGAGCTGCCCTGTGTGAAAATG TCGAAGGCTCCTTCCTCTGTGTCTCCCCCAACAGCCCGGAAGAGTTTGACCCCATGACTGGACGCTGTGTTCCCC CACGAACTTCTGCTGGCACGTTCCCAGGCTCGCAGCCCCAGGCACCTGCTAGCCCCGTTCTGCCCGCCAGGCCAC TTGACACAGCGGCCCCGGATGCATGTGACAACATCCTGGCTCGGAATGTGACATGGCAGGAGTGCTGCTGTACTG TGGGTGAGGGCTGGGGCAGCGGCTGCCGCATCCAGCAGTGCCCGGGCACCGAGACAGCTGAGTACCAGTCATTGT GCCCTCACGGCCGGGGCTACCTGGCGCCCCAGTGGAGACCTGAGCCTCCGGAGAGACGTGGACGAATGTCAGCTCT TCCGAGACCAGGTGTGCAAGAGTGGCGTGTGTGTAACACGGCCCCGGGCTACTCATGCTATTGCAGCAACGGCT

5909/6881 FIGURE 5446B

ACTACTACCACACACGGGTGGAGTGCATCGACAATGACGAGTGCGCCGATGAGGAACCGGCCTGTGAGGGCC GCCGCTGTGTCAACACTGTGGGCTCTTATCACTGTACCTGCGAGCCCCCACTGGTGCTGGATGGCTCGCAGCGCC GCTGCGTCTCCAACGAGAGCCAGAGCCTCGATGACAATCTGGGAGTGTGCTGGCAGGAAGTGGGGGCTGACCTCG TGTGCAGCCACCCTCGGCTGGACCGTCAGGCCACCTACACAGAGTGCTGCTGCTGTATGGAGAGGCCTGGGGCA TGGACTGCGCCCTCTGCCCTGCGCAGGACTCAGATGACTTCGAGGCCCTGTGCAATGTGCTACGCCCCCCGCAT ATAGCCCCCGGGACCAGGTGGCTTTGGACTCCCCTACGAGTACGGCCCAGACTTAGGTCCACCTTACCAGGGCC TCCCATATGGGCCTGAGTTGTACCCACCACCTGCGCTACCCTACGCACCCTACCCACCTGGGCCCTTCG CCCGCCGGAGGCTCCTTATGGGGCACCCCGCTTCGACATGCCAGACTTTGAGGACGATGGTGGCCCCTATGGCG AATCTGAGGCTCCTGCGCCACCTGGCCCGGGCACCCGCTGGCCCTATCGGTCCCGGGGACACCCGCCGCTCCTTCC CAGAGCCCGAGGAGCCTCCTGAAGGTGGAAGCTATGCTGGTTCCCTGGCTGAGCCCTACGAGGAGCTGGAGCCGG TCGACGGCTACCGCCTGGACATGACCCGCATGGCCTGCGTTGACATCAACGAGTGTGATGAGGCCGAGGCTGCCT CCCCGCTGTGCGTCAACGCGCTTGCCTCAACACGGATGGCTCCTTCCGCTGCATCTGCCGCCCGGGATTCGCAC CCACGCACCACCACTGTGCGCCCGCACGGCCCCGGGCCTGAGCCCTGGCACCGCTGGCCGCCCACCCG CGCCCGCCACTCGGGGCCCCTGCCGCGCATCCTGCAGCCCGCTTATGCGTATGTGCACGGGGCCCGCCTGGA TGATGTCGTGGTCCCGGGCCTGGCCCAGGGGCCCCTTTACATGCCCTCTCCCTTTTATAAAATTTTCCATTAAAA ACCACCTATTTCT

5910/6881 FIGURE 5447

GTGGTTATCGCGGCCCCACCGGCCTCTGATCTCTGAGTCTTCTCCAACCCACAGACGTTTTTTGTTGCTCTGGT TCCAGGACCTTCTCCACAACTAGGCCATTTTCCCTGCCAGGTGTCCTTTTTGACCTCTTGACCTCTGACTCAAAG GTCAGCTCAAAGGTTCCGAACTCGGGCCTGGGATGTGAGGGGGGTACTGAACCTAAGTTCTCCGAATCTTTAGCCC TCCACATCCAGCCCCAAAGAATGAGTTAACTCCTACTAACTCTCCACCTAAGACTCCCGAGGTAACCCAACCGGT ACCACAGATCCGGTTCCGGATTTAAGGACCCCACCCTGTTAACCGTCAGGTGCCTTATGACTTGAGTCAGCCTCG CAATTCCTGCTCCCGTGGTTTCAAATATTAGCCCTGGTCCTTTCACACCCACTGCTCAGTCCCCAGATTCTGGAA GAACCTCTCAACACCTCCTGTAGACCCCAAAATGACTTCTCCATGCTCTCCCCCTAAAACCACCAATTTCTCC TCCAAAAACCCCTGTACCCCAAGCCAGCAGCATTCCATCTCCTCTACCCCCAAGTCCCCTGGACTTTTCAGC TTTACCATCCCTCCCTGGAGTCAGCAGACCCCTGTTCCCCCACCGCTCCCACTGCCTCCACCCGCTGCCAC GGTCCCCAAGGGCAGAGAAGATGTGAAGAGGCTTCTGAAACTACACAAGGACCGGTTCCGAGGTGACCTGCGGTG GATCCTCTTCTGTGCAGACCTGCCGTCCCTCATCCAAGAAGGCCCTCAATGCGGGCTGGTGGCCTTGTGGATGGC AGGTACTCTCCTGTCGCCCCCAGTGGCGTCCCCCTGGAGAGACTCATACGGGTGGCCACGGAAAGAGGCTACAC GGCCCAGGGAGAGATGTTCTCAGCACCAGCTACGACGAGGACTTCAACCATGAGCCGTGTCAGAGGAAGGGCCAC $\verb|CCTGAGCTGCCGGGCCTGTTCCACCCAGTGCTGGGCACGCCCTGCCAACCACCATCCCTGCCAGAGGAGGGGCTCC| \\$ CCGGGAGCTGTCTACCTGCTGTCCAAGCAGGGCAAGAGTTGGCACTATCAGCTGTGGGACTACGACCAGGTCCGG GAGAGCAACCTGCAGGTGACGGACTTCTCGCCCTCACGGGCCACTGACGGCCGGGTGTACGTGGTGCCCGTGGGT GGGGTACGGGCTGGCCTCTGTGGCCAGGCCCTGCTCCTCACACCACAGGACTGCAGCCATTAGCTGCGGCTGCGG TCTCAGGCTGCAGCCTAGCTCGTTTTAAAGCCCATCTGGGAGCAGTTACCTGTGCCAGCCCCTCTACCTGTGTTA GCAGATCTGGCAACCCTGTAAGGGGGGTGCTAGATGGACCCGATTTGACAGATGGCAAGACTGAGGCCTGGAGAA GTGGAATCACTGGCCTGAGGTCACATGACTAGCACATGGCAAGATGGAGTCTCGTTCTGTCGTCCAGGCTGGAGT GCGGTGGCGTGATCTCAGCTCACTCCAGCCTCCACTTCCCAGGTTCAAGTGATTCTCCTGCCTCAGCCCCCCAAG GTTGGCCAGGCTGGTCTCGAACTCCTGACCTTGAGTAATCCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACA GGTGTGAGCCACTGAGCCCGGCCACAGTGCAGTATTTCTAACCAGTGATCAGGGTAAAGAGGGTGCGTGTCCACC CAAAATAAAAAGCTCTACGACA

GAATTCCTGACTTCCTTTTCGGAGGAAGATCCTTGAGCAGCCGACGTTGGGACAAAGGATTTGGAGAAACCCAGG GCTAAAGTCACGTTTTTCCTCCTTTAAGACTTACCTCAACACTTCACTCCATCGCAGTTCCCGAGACCCGCCCTA ACCACACTATTTATATCAACAACCTCAATGAGAAGATCAAGAAGGATGAGCTAAAAAAAGTCCCTGTACGCCATCT ${\tt TCTCCCAGTTTGGCCAGATCCTGGATATCCTGGTATCACGGAGCCTGAAGATGAGGGGCCAGGCCTTTGTCATCT}$ TCAAGGAGGTCAGCAGCGCCACCAACGCCCTGCGCTCCATGCAGGGTTTCCCTTTCTATGACAAACCTATGCGTA TCCAGTATGCCAAGACCGACTCAGATATCATTGCCAAGATGAAAGGCACCTTCGTGGAGCGGGACCGCAAGCGGG TGGGGGCTGTCCAGGGGCCTGTCCCGGGCATGCCGCCGATGACTCAGGCGCCCCGCATTATGCACCACATGCCGG GCCAGCCGCCTACATGCCGCCCCTGGTATGATCCCCCCGCCAGGCCTTGCACCTGGCCAGATCCCACCAGGGG CCATGCCCCGCAGCAGCTTATGCCAGGACAGATGCCCCCTGCCCAGCCTCTTTCTGAGAATCCACCGAATCACA ${\tt TCTTGTTCCTCACCAACCTGCCAGAGGAGACCAACGAGCTCATGCTGTCCATGCTTTCAATCAGTTCCCTGGCT}$ CAGCTCGCGATGCCCTGCAGGGCTTTAAGATCACGCAGAACAACGCCATGAAGATCTCCTTTGCCAAGAAGTAGC ACCTTTTCCCCCCATGCCTGCCCCTTCCCCTGTTCTGGGGCCACCCCTTTCCCCCTTGGCTCAGCCCCCTGAAGG GTCCCCAGACATTGCACCTGGCGCTGTTAGGCCGGAATTAAAGTGGCTTTTTGAGGTTTTGGTTTTTCACAAAAAA **AAGGAATTC**

MAVPETRPNHTIYINNLNEKIKKDELKKSLYAIFSQFGQILDILVSRSLKMRGQAFVIFKEVSSATNALRSMQGF PFYDKPMRIQYAKTDSDIIAKMKGTFVERDRKREKRKPKSQETPATKKAVQGGGATPVVGAVQGPVPGMPPMTQA PRIMHHMPGQPPYMPPPGMIPPPGLAPGQIPPGAMPPQQLMPGQMPPAQPLSENPPNHILFLTNLPEETNELMLS MLFNQFPGFKEVRLVPGRHDIAFVEFDNEVQAGAARDALQGFKITQNNAMKISFAKK

CGGACGAGGCACGAGTGAGGGGGGGGGGGGGGGGGGCGCCATTTTGAGCCGCTGCCGCCATTGGAGTGGGCCCC CCCCTTTCCCCTTCGCCTCCTGACAGGAAAGGTTTAAGGGGGACAGAGCCCTGGGAGGCCGGGCCGGGCTCGG GCGGCCTGGACACTCGAGGCCTCAAGGCCGAGCTTGCTGAGGCGGCTGCAGGCGGCGTTGGAGGCCGAGGAGCCTG ACGACGAGCGGGAGCTCGACGCCGACGACGACCGGGCGCACCCCGGGCACATCAACGAGGAGGTCGAGACCGAGG GGGGCTCCGAGCTGGAGGGGACCGCGCAGCCACCGCCGGGCTGCAGCCGCACGCGGAGCCCGGCGGCTACT CGGGGCCGGACGGACATTATGCCATGGACAATATTACCAGGCAGAACCAATTCTACGATACCCAAGTCATCAAAC AAGAAAACGAGTCAGGCTACGAGAGGAGACCACTGGAAATGGAGCAGCAGCAGGCCTATCGTCCAGAAATGAAGA CAGAGATGAAGCAAGGAGCACCCACCAGCTTCCTCCCGCCTGAAGCTTCTCAACTCAAGCCAGACAGGCAGCAAT TCCAGAGTCGAAAGAGGCCTTATGAAGAAAACCGGGGACGGGGTACTTTGAGCACCGAGAGGATAGGAGGGGCC GCTCTCCTCAGCCTCCTGCTGAAGAGGATGAAGATGACTTTGATGATACCCTTGTTGCTATTGACACCTATAACT GCGACCTCCACTTCAAGGTGGCCCGAGATCGGAGTAGTGGCTATCCGCTCACAATTGAGGGCTTTGCATACCTGT GGTCAGGAGCCCGTGCCAGCTATGGGGTCAGAAGGGGCCGTGTATGCTTCGAGATGAAGATCAATGAGGAAATCT CCGTGAAGCACCTTCCGTCTACAGAGCCTGACCCCCACGTGGTCCGTATCGGCTGGTCCCTGGACTCCTGCAGCA CCCAGCTAGGCGAAGAGCCTTTCTCCTATGGCTATGGAGGCACTGGGAAGAAGTCCACCAATAGCCGGTTTGAAA ACTACGGAGACAAGTTTGCAGAGAACGATGTGATTGGCTGCTTTTGCGGATTTTGAATGTGGAAATGACGTGGAAC TCTATCCTCATGTCCTGGTGAAGAATTGCGCAGTGGAGTTCAACTTCGGACAGAGAGCAGAGCCCTACTGTTCTG TCCTCCCGGGGTTTACCTTCATCCAGCACCTTCCCCTTAGTGAGCGTATCCGGGGCACCGTTGGACCAAAGAGCA CCTCCAACCCTTCCAAGAAGTACAACATCCTGGGTACCAATGCCATCATGGATAAGATGCGGGTGATGGGCCTAC GCCGCCAGCGGAACTATGCTGGCCGCTGGGATGTCCTGATCCAGCAGGCCACCCAGTGCCTCAACCGCCTCATCC AGATTGCTGCCCGCAAGAAACGCAACTATATCCTAGATCAGACAAATGTTTATGGGTCAGCCCAGAGACGAAAAA TGAGACCATTTGAAGGCTTCCAGCGCAAAGCTATTGTAATTTGTCCCACTGACGAGGACCTAAAAGACCGAACAA TAAAGCGAACCGACGAGGAAGGAAGGATGTCCCAGATCATGCGGTCTTAGAAATGAAAGCCAACTTCACGTTGC CAGATGTTGGGGACTTCCTGGATGAGGTTCTGTTCATTGAGCTGCAGCGGGAAGCGGACAAGCTAGTGAGGC AGTACAACGAGGAAGGCCGCAAGGCTGGGCCACCCCTGAAAAGCGCTTTGACAACCGAGGTGGTGGTGGCTTCC GGGGCCGCGGGGTGGTGGTGGCTTCCAGCGCTATGAAAACCGAGGACCCCCTGGAGGCAACCGTGGCGGCTTCC AGAACCGAGGGGAGGCAGCGGTGGAGGAGGCAACTACCGAGGAGGTTTCAACCGCAGCGGAGGTGGTGGCTATA GCCAGAACCGCTGGGGTAACAACAACCGGGATAACAACAACTCCAACAACAGAGGCAGCTACAACCGGGCTCCCC GCCCTGCTCGGAACCCCCAGGGGCCAGCACCTACAATAAGAACAGCAACATCCCTGGCTCAAGCGCCAATACCA GCCAGGGCTACACAGCCCCACCGCCTCCACCTCCACCACCTGCCTACAACTATGGGAGCTACGGCGGTTACA ACCCGGCCCCTATACCCCACCGCCACCCCCACTGCACAGACCTACCCTCAGCCCAGCTATAACCAGTATCAGC AGTATGCCCAGCAGTGGAACCAGTACTATCAGAACCAGGGCCAGTGGCCGCCATACTACGGGAACTACGACTACG GGAGCTACTCCGGGAACACACAGGGTGGCACAAGTACACAGTAGCCAGTGTGACCCAGAGGCTCCCGGAGGCCCC TGCCGGCTTCCTCCACCAGCGCCTGCCTCGGCCCCTCTCTGCCCCGCGGATCCCGTGGTGCTGGGGATGGGG TTTTTTTCTGGATTCAAACAGGCAACAATGACCTTTTATTTTCTGTTTGTCCCCACCTCCCCAGCCTTCCACCTC CTGTTCTTCCTACCTTCTTCTTTTTGACTAAATAATCCCCACCTCCCTTGATCATACAGTGAGGCTACAGTGAC TGAGGGGAGAATCCCCTCCTGTTCACTCTCCCAACCCTGCTCCAGCCCCTCAGCTTCCCAGACCCTCATGCAGTT GTGACTGAGGAAGAGCCACAAAACAAAACAAAACCAAAACC

5914/6881 FIGURE 5451

TAGTGTGCGGGGCCGGCGGCGGTTGAAAAGTCCGAGAGAATCAGGATGGAGGCCGTGGCGACGGCGACGGCGG CGAAGGAACCCGATAAGGGCTGCATAGAGCCTGGACCTGGGCACTGGGGTGAGCTGAGCCGGACACCAGTCCCAT CTAAACCCCAGGACAAAGTGGAAGCAGCTGAGGCAACACCAGTGGCCCTGGACAGTGACACCTCCGGGGCTGAAA CCGACTTGACAGAGCATGAGAAAGTGGCCATCCTGGCCCAGCTGTACCACGAGAAGCCACTGGTGTTCCTGGAGC ACTGTGCTGAGGTGGCCCGGCACGGCCCCGCACCCTGCGTACCCGCTGCGTAACCGGCGCTATG CTGCCCTGCGAGAGCTGATCCAAGGGGGCGAGTACTTCAGTGATGAGCAGATGCGGTTCCGGGCCCCCCTGCTAT CCGGGTCCCCGGGAGACCTGCTTGCCCGCTCTCCAACTTGCTGCTCCAGTCCTACGAGGAGCGGGAGCTACAGC AGCGTCTGCTCCAACAGCAGGAGGAGGAGGAGGCCTGCTTGGAGGAAGAGGAAGAGGAGGAGGACAGTGACGAGG AAGACCAGAGGTCAGGCAAGGACTCGGAGGCCTGGGTTCCCGACTCGGAGAGAGGCTGATCCTGCGAGAGGAGT TCACCAGCCGCATGCACCAGCGCTTCCTAGATGGCAAGGACGGGGACTTTGACTACAGCACAGTAGACGACAACC CCGACTTCGACAACCTCGACATCGTGGCACGGGATGAGGAGGAGGGTACTTTGATGAGGAAGAACCTGAGGATG CGCCCAGCCCAGAGCTGGATGGGGACTGATGGCCGCCACCCTTCCCACCGCCTGCCCCATCCCCATCCCCAACAA GGCAGCTGATTCCAGGCCTGCTCAGTGACCCTTTCTCTAGGGGGGACATCAGGGCAGTGCCCCACAACCCACACAC ACCACCATCTCACTGGGTCTAGTCTCATCTCAGACAACCCCCACCCCACTGTTTCTGGGGTTCCCTTTCTCATC CCTTAGGCTCTGTCTCCACCGCAGGGCCCAAGGTGAAAGTCCTCCCCTTGCCGGAGGCCAGCTGGCAGGGCCTTT CTCCCCCTCTCTGTTTATGTCTGCGCTGTGTCTCACACTCAGAGCCTCCTTGCTTCTGTTAGGTTCCCATCTCTC CTTCTGCCTCACTCTGGGCCTCTTCTTCTACTTGTACATTTCCACCTCTCTAGGCCTCTGCTCTCACTGTCCCT CTCTGTCTGTCTCTCAGCCTTTATCTCTGGGTTTTGATCCCCCACTCCAGGCTCTGGGCCCCTTCTTCCCCCTTC CCTCAAACCTGGCTGCTATAGGCAGCAGAACCCTGACCACTGAGTAATACAGCCCCAGGGGAGGAGGAGACCCC AGGCAGGGAGGATGGGGGCAGCTCTCTTCTCCCCAGGACCCAGGCTGTGGATCACGGGGCCTGCCAGCTTGAG TGTAGAGGGAGGGGGGACTCTACCCTTCTCAGCCCCACCAGCCCCCTCTGCCCAACCACAATTTTCCCTTCCTC CGCCTTCCTCTCCTGTTTACACTCCCCAAATGCGCACAGGCTGTTATCATGGGTCCTGAGTCATCCCAC ACACAGCCTGCCCCAGCGTCCCCCAGCTGGCCGCAGGGCCCCCATGGAGCCCCCTGCCGCCTGGGC TAATGGGAGCCAGATGGCCGCCTGGTGACTCAGCCACCGGGCCTGTGGGAACCCAGGCGTCCCGCCTTCCCATGC CCCCACACCCGGCTCCTGCTCCCCCAGCAGACACACAGGGGGGCCTGGCCACTGTTGAGGGGGCACACAGGGC CTGAAGGACCCTCAAAACTGCCTCCTGGAGTCCACGGTTCCTGACCTCCGAGCCTCAGCTATGCCCTCTGGGTCA ACGAAAGCCTCTGCTACGGAGCGCTTCTGTCCTCTGTCAGGCCCGAGCGAAGTGCCTGACACCGGGTTGGATCCT CAGATGGCCCCATGAACTAGTGAAGTGGGTCAAAGGAGGCCTGGAAAGATGTTGCTTCCTCAAGGCCACTCGGCC ATCAGAGGCAGAAATGAAACAGGAACCCAGGCCTAGAATCACAAAGGTCCTAGAAACCACTTGGCTGTCTGGCCT TCAGGTCATCTTGATATGGAGATCAGTCCCCAAATCACTGAATTGTCCCAGCAGTGCTATGCCCTAGGTACTACC AATATCACTCCTCTATTTCCCAGAGGAGGAAGCAGCAGCTAGACTCCAGGACCTTGGGGTCATATCTCTCAGAAA CTGGGCCACAGGAAAGGTATCAGCCCTTGGTGATAGGCACATTTTTTACCAGTCTATCATTTGGTCATTAAATTT

MEAVATATAAKEPDKGCIEPGPGHWGELSRTPVPSKPQDKVEAAEATPVALDSDTSGAENAAVSAMLHAVAASRL PVCSQQQGEPDLTEHEKVAILAQLYHEKPLVFLERFRTGLREEHLACFGHVRGDHRADFYCAEVARQGTARPRTL RTRLRNRRYAALRELIQGGEYFSDEQMRFRAPLLYEQYIGQYLTQEELSARTPTHQPPKPGSPGRPACPLSNLLL QSYEERELQQRLLQQQEEEEACLEEEEEEEDSDEEDQRSGKDSEAWVPDSEERLILREEFTSRMHQRFLDGKDGD FDYSTVDDNPDFDNLDIVARDEEERYFDEEEPEDAPSPELDGD

5916/6881 FIGURE 5453

AGCTGGTCGGGAGAAGAGAGAAAAAACTTTTGAGACTTTTCCGTTGCCGCTGGGAGCCGGAGGCGCGGGGACCTC TTGGCGCGACGCTGCCCCGCGAGGAGGCAGGACTTGGGGACCCCAGACCGCCTCCCTTTGCCGCCGGGGACGCTT GCTCCCTCCCTGCCCCTACACGGCGTCCCTCAGGCGCCCCCATTCCGGACCAGCCCTCGGGAGTCGCCGACCCG GCCTCCCGCAAAGACTTTTCCCCAGACCTCGGGCGCACCCCCTGCACGCCGCCTTCATCCCCGGCCTGTCTCCTG AGACCACCCACCTTCTGGTACCAGATCGCGCCCATCTAGGTTATTTCCGTGGGATACTGAGACACCCCCGGTCCA AGCCTCCCCTCCACCACTGCGCCCTTCTCCCTGAGGACCTCAGCTTTCCCTCGAGGCCCTCCTACCTTTTGCCGG GAGACCCCCAGCCCTGCAGGGGCGGGGCCTCCCCACCACCACCCTGTTCGCGCTCTCGGCAGTGCCGGGGG TGACGCCTGGCCGGCCGCGGGACTATCCACCTGCAAGACTATCGACATGGAGCTGGTGAAGCGGAAGCGCA TCGAGGCCATCCGCGGCCAGATCCTGTCCAAGCTGCGGCCCAGCCCCCGAGCCAGGGGGGAGGTGCCGCCCG GCCCGCTGCCCGAGGCCGTGCTCGCCCTGTACAACAGCACCCGCGACCGGGTGGCCGGGGAGAGTGCAGAACCGG AGCCCGAGCCTGAGGCCGACTACTACGCCAAGGAGGTCACCCGCGTGCTAATGGTGGAAACCCACAACGAAATCT ATGACAAGTTCAAGCAGAGTACACAGCATATATATGTTCTTCAACACATCAGAGCTCCGAGAAGCGGTACCTG AACCCGTGTTGCTCTCCCGGGCAGAGCTGCGTCTGCTGAGGCTCAAGTTAAAAGTGGAGCAGCACGTGGAGCTGT ACCAGAAATACAGCAACAATTCCTGGCGATACCTCAGCAACCGGCTGCTGGCACCCAGCGACTCGCCAGAGTGGT TATCTTTTGATGTCACCGGAGTTGTGCGGCAGTGGTTGAGCCGTGGAGGGGAAATTGAGGGCTTTCGCCTTAGCG CCCACTGCTCCTGTGACAGCAGGGATAACACACTGCAAGTGGACATCAACGGGTTCACTACCGGCCGCCGAGGTG ACCTGGCCACCATTCATGGCATGAACCGGCCTTTCCTGCTTCTCATGGCCACCCCGCTGGAGAGGGCCCAGCATC TGCAAAGCTCCCGGCACCCGAGCCCTGGACACCAACTATTGCTTCAGCTCCACGGAGAAGAACTGCTGCGTGC GGCAGCTGTACATTGACTTCCGCAAGGACCTCGGCTGGAAGTGGATCCACGAGCCCAAGGGCTACCATGCCAACT TCTGCCTCGGGCCCTGCCCTACATTTGGAGCCTGGACACGCAGTACAGCAAGGTCCTGGCCCTGTACAACCAGC GCCGCAAGCCCAAGGTGGAGCAGCTGTCCAACATGATCGTGCGCTCCTGCAAGTGCAGCTGAGGTCCCGCCCCGC $\verb|CCCGCCCCGGCCCGGCCCCGCCCCGCCCCGCCCCGCTGCCTTGCCCATGGGGGGCTGTATTTAAGG| \\$ ACACCCGTGCCCCAAGCCCACCTGGGGCCCCATTAAAGATGGAGAGAGGACTGCGGATCTCTGTGTCATTGGGCG TCTGCACTATTCCTTTGCCCGGCATCAAGGCACAGGGGGACCAGTGGGGAACACTACTGTAGTTAGATCTATTTAT TGAGCACCTTGGGCACTGTTGAAGTGCCTTACATTAATGAACTCATTCAGTCACCATAGCAACACTCTGAGATGC AGGGACTCTGATAACACCCATTTTAAAGGTGAGGAAACAAGCCCAGAGAGGTTAAGGGAGGAGTTCCTGCCCACC AGGAACCTGCTTTAGTGGGGGATAGTGAAGAAGACAATAAAAGATAGTTCAGGCCAGGCGGGGTGGCTCACG CCTGTAATCCTAGCACTTTTGGGAGGCAGAGATGGGAGGATTACTTGAATCCAGGCATTTGAGACCAGCCTGGGT AACATAGTGAGACCCTATCTCTACAAAACACTTTTAAAAAATGTACACCTGTGGTCCCAGCTACTCTGGAGGCTA AGGTGGGAGGATCACTTGATCCTGGGAGGTCAAGGCTGCAG

5917/6881 FIGURE 5454

MEEETHTDAKIRAENGTGSSPRGPGCSLRHFACEQNLLSRPDGSASFLQGDTSVLAGVYGPAEVKVSKEIFNKAT LEVILRPKIGLPGVAEKSRERLIRNTCEAVVLGTLHPRTSITVVLQVVSDAGSLLACCLNAACMALVDAGVPMRA LFCGVACALDSDGTLVLDPTSKQEKEARAVLTFALDSVERKLLMSSTKGLYSDTELQQCLAAAQAASQHVFRFYR ESLQRRYSKS

GTTAGCCAAGATGGCGGTAGCGATCGCTGCAGCGAGGGTCTGGCGGCTAAACCGTGGTTTGAGCCAGGCTGCCCT CCTGCTGCTGCGGCAGCCTGGGGCTCGGGGACTGGCTAGATCTCACCCCCCAGGCAGCAGCAGCAGCTTTTCATC TCTGGATGACAAGCCCCAGTTCCCAGGGGCCTCGGCGGAGTTTATAGATAAGTTGGAATTCATCCAGCCCAACGT CATCTCTGGAATCCCCATCTACCGCGTCATGGACCGGCAAGGCCAGATCATCAACCCCAGCGAGGACCCCCACCT GCCGAAGGAGGAGGTGCTGAAGCTCTACAAGAGCATGACACTGCTTAACACCATGGACCGCATCCTCTATGAGTC CCTGGACAACACGGACCTGGTGTTTGGCCAGTACCGGGAGGCAGGTGTGCTGATGTATCGGGACTACCCCCTGGA ACTATTCATGGCCCAGTGCTATGGCAACATCAGTGACTTGGGCAAGGGGGCGCCAGATGCCTGTCCACTACGGCTG AGCCAAGCGGGCCAATGCCAACAGGGTCGTCATCTGTTACTTCGGCGAGGGGGCAGCCAGTGAGGGGGACGCCCA TGCCGGCTTCAACTTCGCTGCCACACTTGAGTGCCCCATCATCTTCTTCTGCCGGAACAATGGCTACGCCATCTC CACGCCCACCTCTGAGCAGTATCGCGGCGATGGCATTGCAGCACGAGGCCCCGGGTATGGCATCATGTCAATCCG CGTGGATGGTAATGATGTTTTGCCGTATACAACGCCACAAAGGAGGCCCGACGGCGGGCTGTGGCAGAGAACCA GCCCTTCCTCATCGAGGCCATGACCTACAGGATCGGGCACCACAGCACCAGTGACGACAGTTCAGCGTACCGCTC GGTGGATGAGGTCAATTACTGGGATAAACAGGACCACCCCATCTCCCGGCTGCGGCACTATCTGCTGAGCCAAGG CTGGTGGGATGAGGAGCAGGAGAAGGCCTGGAGGAAGCAGTCCCGCAGGAAGGTGATGGAGGCCTTTGAGCAGGC GCAGCAGGAGTCTCTGGCCCGCCACCTGCAGACCTACGGGGAGCACTACCCACTGGATCACTTCGATAAGTGAGA CCTGCTCAGCCCACCCCACCCATCCTCAGCTACCCCGAGAGGTAGCCCCACTCTAAGGGGAGCAGGGGGACCTG ACAGCACACCACTGTCTTCCCCAGTCAGCTCCCTCTAAAATACTCAGCGGCCAGGGCGGCTGCCACTCTTCACCC CTGCTCCTCCCGGCTGTTACATTGTCAGGGGACAGCATCTGCAGCAGTTGCTGAGGCTCCGTCAGCCCCCTCTTC ACCTGTTGTTACAGTGCCTTCTCCCAGGGGCTGGGTGAGGGCACATTCAGGACTAGAAGCCCCTCTGGGCATGGG GTGGACATGGCAGGTCAGCCTGTGGAACTTGCGCAGGTGCCGAGTGGCCAGCAGAGGTCACGAATAAACTGCATCT CTGCGCCTGGCTCTCT

MAVAIAAARVWRLNRGLSQAALLLLRQPGARGLARSHPPRQQQQFSSLDDKPQFPGASAEFIDKLEFIQPNVISG IPIYRVMDRQGQIINPSEDPHLPKEKVLKLYKSMTLLNTMDRILYESQRQGRISFYMTNYGEEGTHVGSAAALDN TDLVFGQYREAGVLMYRDYPLELFMAQCYGNISDLGKGRQMPVHYGCKERHFVTISSPLATQIPQAVGAAYAAKR ANANRVVICYFGEGAASEGDAHAGFNFAATLECPIIFFCRNNGYAISTPTSEQYRGDGIAARGPGYGIMSIRVDG NDVFAVYNATKEARRRAVAENQPFLIEAMTYRIGHHSTSDDSSAYRSVDEVNYWDKQDHPISRLRHYLLSQGWWD EEQEKAWRKQSRRKVMEAFEQAERKPKPNPNLLFSDVYQEMPAQLRKQQESLARHLQTYGEHYPLDHFDK

AGCAAGATGGCGGCTCCCTGGGCGTCCCTGGTCGCCCCCATGTGGAATGGGCGTATCAGGGGCATCCAT CGCCTGGGTGCGGCAGTGGCCCCAGAGGGCAGTCAGAAGAAAAAGGACAATACTCCAGTTCCTGACCAACTAT TTCTACGATGTGGAGGCTCTGAGGGATTACTTGCTCCAAAGGGAGATGTACAAGGTGCATGAGAAAAATCGATCT TACACCTGGCTGGAGAAGCAACATGGTCCATACGGCGCAGGTGCCTTTTTCATCCTGAAGCAGGGAGGCGCAGTC AAGTTTCGAGACAAGGAGTGGATCAGGCCAGATAAGTATGGCCATTTCTCTCAGGAGTTCTGGAATTTCTGTGAA GTGCCTGTCGAAGCTGTGGATGCCGGTGACTGTGACATCAACTACGAGGGCCTGGATAACCTCCTCCGCCTGAAG GAGCTCCAGTCCTTGTCGCTGCAGCGCTGCTCCCACGTGGACGACTGGTGTCTCAGCCGCCTCTACCCACTGGCC GAGATGCTGCCCAATTGCGAGGTTGTGGGAGTCGACTGGGCTGAGGGCCTGAAGTCAGGGCCGGAGGAGCAGCCT $\tt CGGGACACGCCGGCCTGTCCCTGCC\underline{TAG}CCTTTAGCCCTGTCCCCACTCACGTGGCTTCTCAGCGGGCTGCAT$ GCCAATCACAGGAGAGCGTGAGTTCCCAGTATTTATTCCTGGCTGCCCTTGGCTAAAGGTCACAGCTCCTGTC ACCCTGTCAGGCAGCCCTTTCCATGCCCCTGTTCAGGCCTGGGGAGGTAAAGGCTCAGGCTGTTAGTAGCCGCAG AGAGCCACACTCACCTTGTCAGGAGACTCTTCTCAAACTGTCCTTATGTGAGTGCACTGCCATTTCTTGCAGGGA CCCTGACTGACACAGGGGCTACTACTGACACTTTACAGGGATGGTTCTCCCCCGTGCAGGGCCGCTGTGCCCACT GCAGGACATGCAGCATCCTTCGCCCCACTCCACTCACTAAAGGCCAGCGCACCCCAGGCCCCATAGTATTGCTGG TTATGGATTTATTGACTTTATGTTCCAAATTCAGCTTTTTCAGTTGGCAGTTTTTTGAAAGGGGATAAGCTTTGT TCTGGACGCCGCAGTGCATGTGGCTTCCCCAGCACCCAGCTCCTGAAGCACCAGGCGGTCAGCAGCTGCCCTTGG CACCCTCCAGCCCTCAGAAGTTGCGTAGGAGACACAGCGCCTCCACTGAGGCACCTCTCTGGGAATAACGTTCCC CAGCACCCCAAATGGATTTCCAGTCAATTCAGAAGCATTTTACCAGTGAAGCCCTCATTATTCCAGTTCACTGTT AAAGCCAGTAATTCTCTATATTAAACTTTCCCTGTTCAAGTT

 ${\tt MAAPWASLRLVAPMWNGRIRGIHRLGAAVAPEGSQKKKRTILQFLTNYFYDVEALRDYLLQREMYKVHEKNRSYT} \\ {\tt WLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKEL} \\ {\tt QSLSLQRCSHVDDWCLSRLYPLADSLQELSLAGCPRISERGLACLHHLQNLRRLDISDLPAVSNPGLTQILVEEM} \\ {\tt LPNCEVVGVDWAEGLKSGPEEQPRDTASPVPA} \\ {\tt MAPPWASLRLVAPMWNGRIRGIHRLGAAVAPEGSQKKKRTILQFLTNYFYDVEALRDYLQREMYKVHEKNRSYT} \\ {\tt MLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPA} \\ {\tt MAPPWASLRLVAPMWNGRIRGIHRLGAAVAPEGSQKKKRTILQFLTNYFYDVEALRDYLQREMYKVHEKNRSYT} \\ {\tt MLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKELL \\ {\tt MLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKELL \\ {\tt MLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKELL \\ {\tt MLEKQHGPYGAGAFFILKQGGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKELL \\ {\tt MLEKQHGPYGAGAFFILKQGAVKFRDKEWIRPDKYGHFSQEFWNFCEVPVEAVDAGDCDINYEGLDNLLRLKELL \\ {\tt MLEKQHGPYGAGAFFILKGGAVAFFILKGAMAGAFFIL$

5923/6881 FIGURE 5460

5926/6881 FIGURE **5463**

 ${\tt MMQRSELSASSEKLREKGGPGNRGKKVIENRALKDEEKMELQEIQLREAKHIAEEADRKYEEVARKLVIIEGDLE} \\ {\tt RTEERAELAESLCREMDEQIRLMDQNLKCLSAAEEKYSQKEDKYEEEIKILTDKIKEAETHAEFAERSVAKLEKTIDDLEDKLKCTKGEHLCTQRMLDQTLLDLNEM} \\ {\tt CONTROL OF CONTROL$

ATGTCTAAGTCAGAGTGTCCCGAAGAGCCTGAACAGCTGAGGAAGCTCTTCATTGGAGGATTGAGCTTTGAAACA
ACTGATAAGAGCCTGAGAAGCCATTTTGAGCAATGGAGAATGCTCACGGACTGTGTGGTGGATAGAAGAGTTGTG
GAACCAAAGAGAGCTGTCTCAAGAGAAGATTCTCAAAGACCAGAACATCACCTAAGAGATTATTTTGAACAGTAT
GGAAAAATTGAAGTGACTGAAATCATGACTGACCGAGGCAGTGGCAAGAAAAGGGGGCTTTGCCTTTCTAACCTTT
GATGACCGTGACTCCGTGGGTGGCTATGGCGGTTCCAGTAGCAGCAGTAGCTATGGCAGTGGCAGAAGATTT<u>TAA</u>

 ${\tt MSKSECPEEPEQLRKLFIGGLSFETTDKSLRSHFEQWRMLTDCVVDRRVVEPKRAVSREDSQRPEHHLRDYFEQY} \\ {\tt GKIEVTEIMTDRGSGKKRGFAFLTFDDRDSVGGYGGSSSSSSYGSGRRF}$

5931/6881 FIGURE 5468

 ${\tt MPGVTVKDVNQQEFVRALAAFLKKSGKLKVPEWVDTVKLAKHKELAPYDENWFYTRAASTARHLYLRGGAGVGSMTKIYGGRQRNGVMPSHFSRGSKSVARRVLQALEGLKMVEKDQDGGRKLTPQGQRDLDRIAGQVAAANKKH}$

GGGCGCCCGCCGGTCACTTCCGCGGGACACCAGCCTTGCAGAGCCCAGGGAGA<u>TC</u>GAAGACTTCGCCCGAGGG GCGGCCTCCCCAGGCCCTCCCGGCCTGGCCTGGTTCCCGTCAGCATCATCGGGGGCTGAGGATGAGGATTTTGAG AACGAGCTGGAGACAAACTCAGAAGAGCAAAACAGCCAGTTCCAGAGCCTGGAGCAGGTGAAGCGGCGCCCAGCC CACCTCATGGCCCTCCTGCAGCACGTGGCCCTGCAGTTTGAGCCAGGACCCCTGCTTTGCTGTCTGCATGCCGAC ATGCTGGGCTCACTGGGCCCCAAGGAGGCCCAAGAAGGCCTTCCTGGACTTCTACCACAGCTTCCTGGAGAAGACA GCGGTTCTCCGGGTGCCGTCCCTCCCAACGTCGCCTTTGAACTTGACCGCACTAGGGCTGACCTCATCTCCGAG GATGTCCAGCGGCGGTTCGTGCAGGAGGTGGTGCAAAGCCAGCAGGTAGCCGTGGGCCGGCAGCTGGAGGACTTC CGTTCCAAGCGGCTCATGGGCATGACGCCCTGGGAGCAGGAGCTGGCCCAGCTGGAGGCTTGGGTTGGGCGGGAC $\tt CGAGCCAGCTACGAGGCCCGGGAGCGGCACGTGGCGGAGCGGCTGCTCATGCACCTGGAGGAGATGCAACATACC$ ATCTCTACCGACGAAGAAAAGAGTGCTGCCGTGGTCAACGCCATTGGCCTGTACATGCGCCACCTTGGGGTGCGG ACCAAGAGTGGAGACAAGAAGTCGGGGAGGAACTTCTTCCGGAAAAAGGTGATGGGGAACCGGCGGTCGGACGAG GATTTTCGACACCTCAAAGCAGAGGTTGATGCCGAGAAGCCAGGTGCTACAGACCGGAAGGGAGGCGTGGGGATG CCCTCTCGGGACCGGAATATCGGGGCTCCTGGGCAGGACACCCCTGGAGTCTCTCTGCACCCTCTGTCCCTGGAC AGCCCAGACCGGGAACCAGGTGCTGACGCCCCCTGGAGCTGGGGGACTCATCCCCGCAGGGCCCAATGAGCCTG GAGTCCTTGGCGCCCCCAGAGAGTACCGACGAGGGGGCCCGAAACCGAGAGCCCCGAGCCTGGAGATGAGGGGGAG CCGGGGCGGTCGGGACTGGAGCTTGAACCAGAAGAGCCTCCCGGCTGGCGGGAACTCGTCCCCCAGACACCCTG CACAGCCTGCCCAAGAGCCAGGTGAAGCGGCAGGAGGTCATCAGCGAGCTGCTGGTGACAGAGGCGGCCCACGTG CGCATGCTGCGGGTGCTGCACGACCTCTTCTTCCAGCCCATGGCAGAATGCCTGTTCTTCCCCTTGGAGGAGCTG CAGAACATCTTCCCCAGCCTGGACGAGCTCATCGAGGTGCATTCCCTGTTCCTCGATCGCCTGATGAAGCGGAGG CAGGAGAGTGGCTACCTCATCGAGGAGATCGGAGACGTGCTGGTGGCCCGGTTTGATGGTGCTGAGGGCTCCTGG TTCCAGAAAATCTCCTCCCGCTTCTGCAGCCGCCAGTCATTTGCCTTAGAGCAGCTCAAAGCCAAGCAACGCAAG GACCCTCGGTTCTGTGCCTTCGTGCAGGAAGCTGAGAGCCGCCGCGGTGCCGCCGCCTGCAGCTGAAGGACATG ATCCCCACGGAGATGCAGCGGCTGACCAAGTACCCCCTGCTCCTGCAGAGCATCGGGCAGAACACAGAAGAGCCC ACAGAACGGGAGAAAGTGGAGCTGGCAGCCGAGTGCTGCCGGGAAATTCTACACCACGTCAACCAAGCCGTGCGT GACATGGAGGACCTGCTGAGGCTCAAGGACTATCAGCGGCGCCCTGGACTTGTCCCACCTTCGGCAGAGCAGCGAC CCTATGCTGAGCGAGTTCAAGAACCTGGACATCACCAAGAAGAAATTGGTCCACGAGGGCCCACTGACGTGGCGG GTGACTAAGGACAAGGCAGTGGAGGTGCATGTGCTGCTGCTGCTGCTGCTGCTGCTGCTCCAGCGCCAGGAC GAGCGGCTGCTCAAGTCCCATAGCCGGACACTGACGCCCACGCCCGATGGCAAGACCATGCTGCGGCCCGTG CTGCGGCTCACCTCCGCCATGACCCGCGAGGTGGCCACCGATCACAAAGCCTTCTACGTCCTTTTTACCTGGGAC CAGGAGGCCCAGATATACGAGCTGGTGGCACAGACTGTGTCGGAGCGGAAAAACTGGTGTGCTCTCATCACTGAG ACTGCCGGATCCCTGAAAGTCCCTGCCCTGCCTCTCGCCCTAAGCCCCGGCCCAGCCCGAGCACCCGAGAAA CCCCTCCTCAGCAGCTCTGAGAACGGCAATGGTGGCCGAGAGACGTCTCCAGCTGATGCCCGGACCGAGAGAATC CTCAGTGACCTCCTGCCCTTCTGCAGACCAGGCCCCGAGGGCCAGCTCGCTGCCACGGCCCTTCGGAAAGTGCTG GGGGCCCCCTGAGCCCACGCACCGGACCCAGGAAATCCAGGAGAACCTGCTCAGCTTGGAGGAGACCATGAAG CAGCTGGAGGAGTTGGAGGAGTTTTGCCGCCTGAGACCCCTCCTGTCTCAGCTTGGGGGGAACTCTGTCCCC CAGCCTGGCTGCACTTGAGGTTCCCGCCCAGGAAGGCCTTTTGCAAGAAGGAGGAATGGGGGAGAGGACGTGA GGGACCACCCCACCCACACAGCTGCCGCAGCATCTCACACCCCGAGGGCCTGAGGAGAGGGAGCTGTGGGCCAC GCCTGGGAGGGCCCAGCTGGGGTTACTGGCCCCGCATGAGCCTCGGCCATCTCCCCTCCTGCCCTCTGCTTGG GGGACTCAGGGCTCCATTCTGGAGGGCACCACGGTGACCCGGGCCATCTCAGTATTGCCTGTGGGGGCCACCCCT CTAAGAAGAAAAAAAAAAAAAAAAAAAAAAAAAAA

MEDFARGAASPGPSRPGLVPVSIIGAEDEDFENELETNSEEQNSQFQSLEQVKRRPAHLMALLQHVALQFEPGPL
LCCLHADMLGSLGPKEAKKAFLDFYHSFLEKTAVLRVPVPPNVAFELDRTRADLISEDVQRRFVQEVVQSQQVAV
GRQLEDFRSKRLMGMTPWEQELAQLEAWVGRDRASYEARERHVAERLLMHLEEMQHTISTDEEKSAAVVNAIGLY
MRHLGVRTKSGDKKSGRNFFRKKVMGNRRSDEPAKTKKGLSSILDAARWNRGEPQVPDFRHLKAEVDAEKPGATD
RKGGVGMPSRDRNIGAPGQDTPGVSLHPLSLDSPDREPGADAPLELGDSSPQGPMSLESLAPPESTDEGAETESP
EPGDEGEPGRSGLELEPEEPPGWRELVPPDTLHSLPKSQVKRQEVISELLVTEAAHVRMLRVLHDLFFQPMAECL
FFPLEELQNIFPSLDELIEVHSLFLDRLMKRRQESGYLIEEIGDVLLARFDGAEGSWFQKISSRFCSRQSFALEQ
LKAKQRKDPRFCAFVQEAESRPRCRRLQLKDMIPTEMQRLTKYPLLLQSIGQNTEEPTEREKVELAAECCREILH
HVNQAVRDMEDLLRLKDYQRRLDLSHLRQSSDPMLSEFKNLDITKKKLVHEGPLTWRVTKDKAVEVHVLLLDDLL
LLLQRQDERLLLKSHSRTLTPTPDGKTMLRPVLRLTSAMTREVATDHKAFYVLFTWDQEAQIYELVAQTVSERKN
WCALITETAGSLKVPAPASRPKPRPSPSSTREPLLSSSENGNGGRETSPADARTERILSDLLPFCRPGPEGQLAA
TALRKVLSLKQLLFPAEEDNGAGPPRDGDGVPGGGPLSPARTQEIQENLLSLEETMKQLEELEEFCRLRPLLSQ
LGGNSVPQPGCT

GAGCCGCCAAGATGGGGGACAAGAAGATGACAAGGACTCACCCAAGAAGAACAAGGGCCAAGGAGCGCCGGGACC TGGATGACCTCAAGAAGGAGGTGGCTATGACAGAGCACAAGATGTCAGTGGAAGAGGTCTGCCGGAAATACAACA CAGACTGTGTGCAGGGTTTGACCCACAGCAAAGCCCAGGAGATCCTGGCCCGGGATGGGCCTAACGCACTCACGC GGGCTATCCTCTGCTTCCTGGCCTACGGTATCCAGGCGGCCACCGAGGACGACCCCTCTGGTGACAACCTGTACC TGGGCATCGTGCTGGCGGCCGTGGTGATCATCACTGGCTGCTTCTCCTACTACCAGGAGGCCAAGAGCTCCAAGA TCATGGAGTCCTTCAAGAACATGGTGCCCCAGCAAGCCCTGGTGATCCGGGAAGGTGAGAAGATGCAGGTGAACG $\tt CTGAGGAGGTGGTGGGGGACCTGGTGGAGATCAAGGGTGGAGACCGAGTGCCAGCTGACCTGCGGATCATCT$ CAGCCCACGGCTGCAAGGTGGACAACTCCTCCCTGACTGGCGAATCCGAGCCCCAGACTCGCTCTCCCGACTGCA CTCACGACAACCCCTTGGAGACTCGGAACATCACCTTCTTTTCCACCAACTGTGTGGAAGGCACGGCTCGGGGCG TGGTGGTGGCCACGGCCGCACTGTCATGGGCCGTATCGCCACCCTGGCATCAGGGCTGGAGGTGGGCAAGA $\tt CGCCCATCGCCATCGAGATTGAGCACTTCATCCAGCTCATCACCGGCGTGGCTGTCTTCCTGGGTGTCTCCTTCT$ TCATCCTCTCCTCATTCTCGGATACACCTGGCTTGAGGCTGTCATCTTCCTCATCGGCATCATCGTGGCCAATG TCCCAGAGGGTCTGCTGGCCACTGTCACTGTGTGTCTGACGCTGACCGCCAAGCGCATGGCCCGGAAGAACTGCC TGGTGAAGAACCTGGAGGCTGTAGAAACCCTGGGCTCCACGTCCACCATCTGCTCAGATAAGACAGGGACCCTCA $\verb|CTCAGAACCGCATGACAGTCGCCCACATGTGGTTTGACAACCAGATCCACGAGGCTGACACCACTGAGGACCAGT|\\$ TCTTCAAGGGTGGTCAGGACAACATCCCTGTGCTCAAGAGGGATGTGGCTGGGGGATGCGTCTGAGTCTGCCCTGC TCAAGTGCATCGAGCTGTCCTCTGGCTCCGTGAAGCTGATGCGTGAACGCAACAAGAAAGTGGCTGAGATTCCCT TCAATTCCACCAACAAATACCAGCTCTCCATCCATGAGACCGAGGACCCCAACGACAACCGATACCTGCTGGTGA TGAAGGGTGCCCCGAGCGCATCCTGGACCGCTGCTCCACCATCCTGCTACAGGGCAAGGAGCAGCCTCTGGACG AGGAAATGAAGGAGGCCTTCCAGAATGCCTACCTTGAGCTCGGTGGCCTGGGCGAGCGCGTGCTTGGTTTCTGCC ATTATTACCTGCCCGAGGAGCAGTTCCCCAAGGGCTTTGCCTTCGACTGTGATGACGTGAACTTCACCACGGACA ACCTCTGCTTTGTGGGCCTCATGTCCATGATCGACCCCACCCCGGGCAGCCGTCCCTGACGCGGTGGGCAAGTGTC GCATCATCTCTGAGGGCAACGAGACTGTGGAGGACATCGCCGCCCGGCTCAACATTCCCGTCAGCCAGGTTAACC TGCAGAATCACACCGAGATCGTCTTCGCCCGCACATCCCCCCAGCAGAAGCTCATCATTGTGGAGGGCTGTCAGA GACAGGGTGCAATTGTGGCTGTGACCGGGGATGGTGTGAACGACTCCCCCGCTCTGAAGAAGGCCGACATTGGGG GCAATATCCCGGAGATCACGCCCTTCCTGCTGTTCATCATGGCCAACATCCCGCTGCCCCTGGGCACCATCACCA TCCTCTGCATCGATCTGGGCACTGACATGGTCCCTGCCATCTCACTGGCGTACGAGGCTGCCGAAAGCGACATCA TGAAGAGACAGCCCAGGAACCCGCGGACGGACAAATTGGTCAATGAGAGACTCATCAGCATGGCCTACGGGCAGA TTGGAATGATCCAGGCTCTCGGTGGCTTCTTCTCTTACTTTGTGATCCTGGCAGAAAATGGCTTCTTGCCCGGCA ACCTGGTGGGCATCCGGCTGAACTGGGATGACCGCACCGTCAATGACCTGGAAGACAGTTACGGGCAGCAGTGGA CATACGAGCAGAGGAAGGTGGTGGAGTTCACCTGCCACACGGCCTTCTTTGTGAGCATCGTTGTCGTCCAGTGGG CCGATCTGATCATCTGCAAGACCCGGAGGAACTCGGTCTTCCAGCAGGGCATGAAGAACAAGATCCTGATCTTCG GGCTGTTTGAGGAGACGGCCCTGGCTGCCTTCCTGTCCTACTGCCCCGGCATGGACGTGGCCCTGCGCATGTACC CTCTCAAGCCCAGCTGGTGGTTCTGTGCCTTCCCCTACAGTTTCCTCATCTTCGTCTACGACGAAATCCGCAAAC TCATCCTGCGCAGGAACCCAGGGGGTTGGGTGGAGAAGGAAACCTACTAC<u>TGA</u>CCTCAGCCCCACCACATCGCCC ATCTCTTCCCCGTCCCCAGGCCCAGGACCGCCCCTGTCAGTCCCCCCAATTTTGTATTCTGGGGGGAGGAGCCC CCCCTGCCCCAAACCTCTCTCTCTCTTTTTCTGTGTCAGTTTCTCTCCCTCTCACCCCTCTATCCATTCC TCCCGCCCCAGCCACCTCCCTGGGCTCTTTTTTACTCCCCTTCAGCCCCCCGGCTGATGCCATCTCTGGTTCTGG ACAATTATCAAATATATCAGTGGGGAGAGAG

MGDKKDDKDSPKKNKGKERRDLDDLKKEVAMTEHKMSVEEVCRKYNTDCVQGLTHSKAQEILARDGPNALTPPPT
TPEWVKFCRQLFGGFSILLWIGAILCFLAYGIQAGTEDDPSGDNLYLGIVLAAVVIITGCFSYYQEAKSSKIMES
FKNMVPQQALVIREGEKMQVNAEEVVVGDLVEIKGGDRVPADLRIISAHGCKVDNSSLTGESEPQTRSPDCTHDN
PLETRNITFFSTNCVEGTARGVVVATGDRTVMGRIATLASGLEVGKTPIAIEIEHFIQLITGVAVFLGVSFFILS
LILGYTWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAKRMARKNCLVKNLEAVETLGSTSTICSDKTGTLTQNR
MTVAHMWFDNQIHEADTTEDQSGTSFDKSSHTWVALSHIAGLCNRAVFKGGQDNIPVLKRDVAGDASESALLKCI
ELSSGSVKLMRERNKKVAEIPFNSTNKYQLSIHETEDPNDNRYLLVMKGAPERILDRCSTILLQGKEQPLDEEMK
EAFQNAYLELGGLGERVLGFCHYYLPEEQFPKGFAFDCDDVNFTTDNLCFVGLMSMIDPPRAAVPDAVGKCRSAG
IKVIMVTGDHPITAKAIAKGVGIISEGNETVEDIAARLNIPVSQVNPRDAKACVIHGTDLKDFTSEQIDEILQNH
TEIVFARTSPQQKLIIVEGCQRQGAIVAVTGDGVNDSPALKKADIGVAMGIAGSDVSKQAADMILLDDNFASIVT
GVEEGRLIFDNLKKSIAYTLTSNIPEITPFLLFIMANIPLPLGTITILCIDLGTDMVPAISLAYEAAESDIMKRQ
PRNPRTDKLVNERLISMAYGQIGMIQALGGFFSYFVILAENGFLPGNLVGIRLNWDDRTVNDLEDSYGQQWTYEQ
RKVVEFTCHTAFFVSIVVVQWADLIICKTRRNSVFQQGMKNKILIFGLFEETALAAFLSYCPGMDVALRMYPLKP
SWWFCAFPYSFLIFVYDEIRKLILRRNPGGWVEKETYY

CCCGAGTCTCAGGAGCCTGCCTTACAGCAGGAGGTGCAGGCCTCGTCACCTGCAGAGGTGCCTGTGTCTCAGCCT GACCCCTTGCCAGCTTCTGACCACAGTTACGAGCTGCGCAATGGTGAAGCCATTGGGCGGGATCGCCGGGGGCGC AGGGCCCGGAGGAACAACAGTGGAGAAGCAGGCGGGGCAGCCACACAGGAGCTCTTCTGCTCAGCCTGTGACCAG $\verb|CTCTTTCTCTCACCCCACCAGCTACAGCAGCACCTGCGGAGTCACCGGGAGGGCGTCTTTAAGTGCCCCCTGTGC| \\$ AGTCGTGTCTTCCCTAGCCCTTCCAGTCTGGACCAGCACCTTGGAGACCATAGCAGCGAGTCACACTTCCTGTGT GTAGACTGTGGCCTGGCCTTCGGCACAGAGGCCCTCCTCCTGGCCCACCGGCGAGCCCACACCCCGAATCCTCTG CATTCATGTCCATGTGGGAAGACCTTTGTCAACCTTACCAAGTTCCTTTATCACCGGCGTACTCATGGGGTAGGG ACTGGAGAGCCAGAGGCCCCTGAGCCCCTGTGTCTGAGGAGACCTCAGCAGGGCCCGCTGCCCCAGGCACCTAC CACACAGGGGAGCGCCCTTCCCCTGCCTGACTGCTCCAAGCCCTTCAACTCACCTGCCAACCTGGCCCGCCAC CGGCTCACACACAGGAGAGCGGCCCTACCGGTGTGGGGACTGTGGCAAGGCTTTCACGCAAAGCTCCACACTG AGGCAGCACCGCTTGGTGCATGCCCAGCACTTCCCCTACCGCTGCCAGGAATGTGGGGTGCGTTTTCACCGTCCT TACCGCCTGCTCATGCACCGCTACCATCACACAGGTGAATACCCCTACAAGTGTCGCGAGTGCCCCGCTCCTTC TTGCTGCGTCGGCTGCTGGAGGTGCACCAGCTCGTGGTCCATGCCGGGCGCCAGCCCCACCGCTGCCCATCCTGT GGGGCTGCCTTCCCCTCACTGCGGCTCCGGGAGCACCGCTGTGCAGCCGCTGCTGCCCAGGCCCCACGGCGC TTTGAGTGTGGCACCTGTGGCAAGAAAGTGGGCTCAGCTGCTCGACTGCAGGCACACGAGGCGGCCCATGCAGCT GCTGGGCCTGGAGAGGTCCTGGCTAAGGAGCCCCCTGCCCCTCGAGCCCCACGGGCCACTCGTGCACCAGTTGCC TCTCCAGCAGCCCTTGGAAGCACTGCTACAGCATCCCCTGCGGGCCCTGCCCGCCGGCGGGTCTAGAGTGCAGC GAGTGCAAGAAGCTGTTCAGCACAGAGACGTCACTGCAGGTGCACCGGCGCATCCACACAGGTGAGCGGCCATAC CCATGTCCAGACTGTGGCAAAGCGTTCCGTCAGAGTACCCACCTGAAAGACCACCGGCGCCTGCACACAGGTGAG CGGCCCTTTGCCTGTGAAGTGTGTGGCAAGGCCTTTGCCATCTCCATGCGCCTGGCAGAACATCGCCGCATCCAC ACAGGCGAACGACCCTACTCCTGCCCTGACTGTGGCAAGAGCTACCGCTCCTTCTCCAACCTCTGGAAGCACCGC AAGACCCATCAGCAGCAGCATCAGGCAGCTGTGCGGCAGCAGCTGGCAGAGGCGGAGGCTGCCGTTGGCCTGGCC GTCATGGAGACTGCTGTGGAGGCGCTACCCCTGGTGGAAGCCATTGAGATCTACCCTCTGGCCGAGGCTGAGGGG $\tt GTCCAGATCAGTGGC\underline{TGA} \tt CTCTGCCCGACTTCCTCTTTGGCACCTCCATTCCCTGTTGCTGAAGGCCCTCCAGCA$ TCCCCTTAAGCATCTGTACATACTGTGTCCCTTCCTCTTCCCATCCCACCACCTTGTAAGTTCTAAATTGGATT TATTCTCTCGTGAGGGGGGTGCTCTGGGGTCCTTGACACACATAAAGGTGCCCCCCCACCTTCCACCTCTTAGCA

MFKKKSHVRNHLRTHTGERPFPCPDCSKPFNSPANLARHRLTHTGERPYRCGDCGKAFTQSSTLRQHRLVHAQHF
PYRCQECGVRFHRPYRLLMHRYHHTGEYPYKCRECPRSFLLRRLLEVHQLVVHAGRQPHRCPSCGAAFPSSLRLR
EHRCAAAAAQAPRRFECGTCGKKVGSAARLQAHEAAHAAAGPGEVLAKEPPAPRAPRATRAPVASPAALGSTATA
SPAAPARRRGLECSECKKLFSTETSLQVHRRIHTGERPYPCPDCGKAFRQSTHLKDHRRLHTGERPFACEVCGKA
FAISMRLAEHRRIHTGERPYSCPDCGKSYRSFSNLWKHRKTHQQQHQAAVRQQLAEAEAAVGLAVMETAVEALPL
VEAIEIYPLAEAEGVQISG

GGGAGCCGCGCCCGGAATCGGGGCGCTTCGCCCCGGGCCCCCCAGCATGAAGACCCCGGCGGACACAGGGTTTG CCTTCCCGGATTGGGCCTACAAGCCAGAGTCGTCCCCTGGCTCAAGGCAGATCCAGCTGTGGCACTTTATCCTGG AGCTGCTGCGGAAGGAGGAGTACCAGGGCGTCATTGCCTGGCAGGGGGACTACGGGGAATTCGTCATCAAAGACC CTGATGAGGTGGCCCGGCTGTGGGGCGTTCGCAAGTGCAAGCCCCAGATGAATTACGACAAGCTGAGCCGGGCCC TGCGCTATTACTATAACAAGCGCATTCTGCACAAGACCAAGGGGAAACGGTTCACCTACAAGTTCAATTTCAACA AACTGGTGCTGGTCAATTACCCATTCATTGATGTGGGGTTGGCTGGGGGTGCAGTGCCCCAGAGTGCCCCGCCAG TGCCGTCGGGTGGTAGCCACTTCCGCTTCCCTCCAACGCCCTCCGAGGTGCTGTCCCCCACCGAGGACCCCC CAGTCAGTGACTGTAGTGATGGCACGTCAGAGCTGGAGGAACCGCTGGGAGAGGATCCCCGGCCCGACCACCCG GCCCTCCGGATCTGGGTGCCTTCCGAGGGCCCCCGCTGGCCCCATGACCCTGGTGTCTTCCGAGTCT ATCCCCGGCCTCGGGGTGGCCCTGAACCCCTCAGCCCCTTCCCTGTGTCGCCTCTGGCCGGTCCTGGATCCCTGC CGATGTACCCCAGTGGTGGCGGGGGGCCCAGCGGCTCAGGGGGAGGCTCCCACTTCTCCTTCAGCCCTGAGGACA TGAAACGGTACCTGCAGGCCCACACCCAAAGCGTCTACAACTACCACCTCAGCCCCCGCGCCTTCCTGCACTACC CTGGGCTGGTGGTGCCCCAGCCCCAGCGCCCTGACAAGTGCCCGCTGCCGCCCATGGCACCCGAGACCCCACCGG TCCCCTCCTCGGCCTCGTCATCCTTCTTCTTCTTCCTCCCCATTCAAGTTTAAGCTCCAGCGGCCCCCACTCG GACGCCGGCAGCGGGCAGCTGGGGAGAAGGCCGTAGCCGCTGCTGACAAGAGCGGTGGCAGTGCAGGCGGGCTGG CTGAGGGGGCAGGGGCGCTAGCCCCACCGCCCCCCCCACCAGATCAAGGTGGAGCCCATCTCGGAAGGCGAGT CGGAGGAGGTAGAGGTGACTGACATCAGTGATGAGGATGAGGAAGACGGGGAGGTGTTCAAGACGCCCCGTGCCC CACCTGCACCCCTAAGCCTGAGCCCGGCGAGGCACCCGGGGCATCCCAGTGCATGCCCCTCAAGCTACGCTTTA AGCGGCGCTGGAGTGAAGACTGTCGCCTCGAAGGGGGGTGGGGGCCCCGCTGGGGGCTTTGAGGATGAGGGTGAGG ACAAGAAGGTGCGTGGGGAGGGCCTGGGGAGGCTGGGGGGCCCCTCACCCCAAGGCGGGTGAGCTCTGACCTCC AGCATGCCACGCCCAGCTCTCCCTGGAGCACCGAGACTCCTGAGGGCTGTGGGCAGGGGACCTGTGTGCCCCGC ACCCCCATGCTTCTTTTGCTGCCTTAAGCCCCCTATGCCCTGGAGGTGAGGGCAGCTCTCTTGTCTCTCCCTG GGGGGAAGTTAAGGGGGTCACCTCCATTCTGGGGAATTTATATTTGAATTGAGGCTTTGGCCTTAACACCCCAGGA CCACCCGCTCTGCCCCACTCCCAGCCCTCCTCAGCCCCAGCCCTGCCCTGCCCTCCCAGGGGGCCATGAGT CCCTCTCCCACTCCCACCCCAGCACCGGTCCAACCCCTTCATCCCCAGCTGCTCCTAGGACTGGCCCATGGGCA GGCGGGTGGGGGATGGGAAGGGGGTGCCCTGAAACCAAACTGGAAGCCCCCTCTGCCTCCCAGCTGGGGCCTCT GGGGTGGGGTGGGGGGTTGGTCAAGCCTTATTCTGTATTGGGGACTGAGGGTGGGGGGAGTAGAGGGGCCGCT GGAGAATGTATTCAAAACAATAAACTTTGGACCTTTGGAAAA

MKTPADTGFAFPDWAYKPESSPGSRQIQLWHFILELLRKEEYQGVIAWQGDYGEFVIKDPDEVARLWGVRKCKPQ
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EVLSPTEDPRSPPACSSSSSSLFSAVVARRLGRGSVSDCSDGTSELEEPLGEDPRARPPGPPDLGAFRGPPLARL
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SHFSFSPEDMKRYLQAHTQSVYNYHLSPRAFLHYPGLVVPQPQRPDKCPLPPMAPETPPVPSSASSSSSSSSSFF
KFKLQRPPLGRRQRAAGEKAVAAADKSGGSAGGLAEGAGALAPPPPPPQIKVEPISEGESEEVEVTDISDEDEED
GEVFKTPRAPPAPPKPEPGEAPGASQCMPLKLRFKRRWSEDCRLEGGGGPAGGFEDEGEDKKVRGEGPGEAGGPL
TPRRVSSDLQHATAQLSLEHRDS

GCCCATCTCAGCCCCTTCCTGCAGATGGCGCATCCCCTGGCAGGGGCTCCTGCTCACAGCCTCACTTTTCACCTT $\verb|CTGGAACCCGCCCACCACTGCTCAGCTCACTATTGAAGCTGTGCCATCCAATGCTGCAGAGGGGAAGGAGGTTCT| \\$ TCTACTTGTCCACAATCTGCCCCAGGACCCTCGTGGCTACAACTGGTACAAAGGGGAAACAGTGGATGCCAACCG TCGAATTATAGGATATGTAATATCAAATCAACAGATTACCCCAGGGCCTGCATACAGCAATCGAGAGACAATATA CCCCAATGCATCCCTGCTGATGCGGAACGTCACCAGAAATGACACAGGATCCTACACCCTACAAGTCATAAAGCT AAATCTTATGAGTGAAGAAGTAACTGGCCAGTTCAGCGTACATCCGGAGACTCCCAAGCCCTCCATCTCCAGCAA GTGGTGGGTAAATGGTCAGAGTCTCCCGGTCAGTCCCAGGCTGCCAGCTGTCCAATGGCAACAGGACCCTCACTCT ACTCAGTGTCACAAGGAATGACGTAGGACCCTATGAATGTGAAATACAGAACCCAGCGAGTGCAAACTTCAGTGA CCCAGTCACCCTGAATGTCCTCTATGGCCCAGATGCCCCCACCATTTCCCCTTCAGACACCTATTACCATGCAGG GGTAAATCTCAACCTCTCCTGCCATGCGGCCTCTAATCCACCCTCACAGTATTCTTGGTCTGTCAATGGCACATT TAACTCAGCCACTGGCCGCAACAGGACCACAGTCAGGATGATCACAGTCTCTGATGCTTTAGTACAAGGAAGTTC TCCTGGCCTCTCAGCTAGAGCCACTGTCAGCATCATGATTGGAGTACTGGCCAGGGTGGCTCTGATA<u>TAG</u>TAGCT CTGGTGTAGTTTCTGCATTTCAAGAAGACTGGCAGACAGTTGTTTTTATTCTTCCTCAAAGCATTTGCAATCAGC TACCATTCAAAATTGCTTCTTCTTCAAGATTTATGGAAAATACTCTGACGAGTACTCTTGAACACAAGTTCCTGA TAACTTTAAGATCACGCCACTGGACTGTCTATGAACTTGCAAACAGGCTGATACCTTTGTGAAGTTGCCCACCAA TTTTTGAGATGGAATCTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCACGATCTCAACTCACTGCAAGCTCCGC CTCCTGGGTTCACACCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCGCCTGCCACAACGCCCGG CAGCCTCCCAAAGTTCTGGGATTACAGGTGTGAGCCACCGCCCCAGCCCGTTTTTAAGATTTTTTATTTGAAAA CAATTTGGTAAAGCAGACTTTTGTGAACAAAAATTATAACATTTACTTTTGCTCCCTACCTGACTGCCACAGAAC ${\tt TGGGCAACTATTCATGAGTATTCATATGTTTATGGTAATTCAGTTATTTGCACAAGTTCAGTGAGAATCTGCTGT}$ CTTTATAATGGGATATAGTTTAAAACATTGGTTATATTACCAAGGCTTTGATTGGGATGTTATATTTGAGAAAAT ACAGAGAATGATAGATTAACGGAGTGTCTAATCTATCGTGTCAACCCCAAATTTTTTACGTATGAGATCCTTTAGT $\verb|CCACCCAATGGCTGACAGTAACAGCATCTTTAACACAACTCTTTGTTCAAATGTACTATGGTCTCTTTTAGAGTC|\\$ AGACTCCTAGACTCACTTGTTCTCACTGTCTGTTTTAATTTAACCCAGGCATGCAATGCTAGATAATAAAATTGC

MGPISAPSCRWRIPWQGLLLTASLFTFWNPPTTAQLTIEAVPSNAAEGKEVLLLVHNLPQDPRGYNWYKGETVDA
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SNNSNPVEDKDAVAFTCEPETQNTTYLWWVNGQSLPVSPRLQLSNGNRTLTLLSVTRNDVGPYECEIQNPASANF
SDPVTLNVLYGPDAPTISPSDTYYHAGVNLNLSCHAASNPPSQYSWSVNGTFQQYTQKLFIPNITTKNSGSYACH
TTNSATGRNRTTVRMITVSDALVQGSSPGLSARATVSIMIGVLARVALI

 $\label{thm:construction} $$ MMAYMNPGPHYSVNALALSGPSVDLMHQAVPYPSAPRKQRRERTTFTRSQLEELEALFAKTQYPDVYAREEVALK$$ INLPESRVQVWFKNRRAKCRQQRQQQKQQQQPPGGQAKARPAKRKAGTSPRPSTDVCPDPLGISDSYSPPLPGPS$$ GSPTTAVATVSIWSPASESPLPEAQRAGLVASGPSLTSAPYAMTYAPASAFCSSPSAYGSPSSYFSGLDPYLSPM$$ VPQLGGPALSPLSGPSVGPSLAQSPTSLSGQSYGAYSPVDSLEFKDPTGTWKFTYNPMDPLDYKDQSAWKFQIL$$ $$ Construction of the co$

TGACAAGATGGCGGCAGGAGGCAGTGGCGTTGGTGGGAAGCGCAGCTCGAAAAGCGATGCCGATTCTGGTTTCCT GGGGCTGCGGCCCACTTCGGTGGACCCAGCGCTGAGGCGGCGGCGGCGAGGCCCAAGAAATAAGAAGCGGGGGCTG GCGGCGGCTTGCTCAGGAGCCGCTGGGGCTGGAGGTTGACCAGTTCCTGGAAGACGTGCGGCTACAGGAGCGCAC GAGCGGTGGCTTGTTGTCAGAGGCCCCAAATGAAAAACTCTTCTTCGTGGACACTGGCTCCAAGGAAAAAGGGCT GACAAAGAAGAACCAAAGTCCAGAAGAAGTCACTGCTTCTCAAGAAACCCCTTCGGGTTGACCTCATCCTCGA GAACACATCCAAAGTCCCTGCCCCAAAGACGTCCTCGCCCACCGGTCCCCAACGCCAAGAAGCTCAGGCGGAA GGAGCAGCTATGGGAGAAGCTGGCCAAGCAGGGCGAGCTGCCCCGGGAGGTGCGCAGGGCCCAGGCCCGGCTCCT CAACCCTTCTGCAACAAGGGCCAAGCCCGGGCCCCAGGACACCGTAGAGCGGCCCTTCTACGACCTCTGGGCCTC AGACAACCCCTGGACAGGCCGTTGGTTGGCCAGGATGAGTTTTTCCTGGAGCAGACCAAGAAGAAAGGAGTGAA GCGGCCAGCACGCCTGCACACCAAGCCGTCCCAGGCACCCGCCGTGGAGGTGGCGCCTGCCGGAGCTTCCTACAA TCCATCCTTTGAAGACCACCAGACCCTGCTCTCAGCGGCCCACGAGGTGGAGTTGCAGCGGCAGAAGGAGGCGGA GGTCTGTCCCACGCCCGCCCGCCTGGCCACCACAGAGAAGAAGACGGAGCAGCAGCGGCGGGGGAGAAGGCTGT GCACAGGCTGCGGGTACAGCAGGCCGCGTTGCGGGCCCCCGGCTCCGGCACCAGGAGCTGTTCCGGCTGCGCGG GATCAAGGCCCAGGTGGCCTGAGGCTGGCGGAGCTGGCGCGGCGGCAGAGGCGGCGGCAGGCGGCGGGAGGC GCTGACAGACTCGCTCAGGACCCTGAAGCCCGAGGGCAACATCCTTCGAGACCGGTTCAAGAGCTTCCAGAGGAG GAATATGATCGAGCCTCGAGAGAGGCCAAGTTCAAACGCAAGTACAAGGTGAAGCTGGTGGAGAAGCGGGCGTT CCGTGAGATCCAGTTGTAGCTGCCATCAGATGCCGGAGACTCGCCCTTCAATAAAAAATCTCTTCTAGCTG

AGCAGCCCGAGGCCATCCGCACGGTGACCTCGGCCCTCAAGGAGCTGTACCGCACGAAGCTGCTGCCGCTGGAGG AGCACTACCGCTTTGGGGCCTTCCACTCGCCGGCCCTGGAGGACGCAGACTTCGACGGCAAGCCCATGGTGCTGG TGGCCGGCCAGTACAGCACGGGCAAGACCAGCTTCATCCAGTACCTGCTGGAGCAGGAGGTGCCCGGCTCCCGCG TGGGGCCTGAGCCCACCACCGACTGCTTTGTGGCCGTCATGCACGGGGACACTGAGGGCACCGTGCCCGGCAACG CCCTCGTCGTGGACCCGGACAAGCCCTTCCGCAAACTCAACCCTTTCGGAAACACCTTCCTCAACAGGTTCATGT GTGCCCAGCTCCCTAATCAGGTCCTGGAGAGCATCAGCATCATCGACACCCCGGGTATCCTGTCGGGTGCCAAGC AGAGAGTGAGCCGCGGCTACGACTTCCCGGCCGTGCTGCGCTGGTTCGCGGAGCGCGTGGACCTCATCATCCTGC TCTTTGATGCGCACAAGCTGGAGATCTCGGACGAGTTCTCAGAGGCCATCGGCGCGTTGCGGGGCCATGAGGACA AGATCCGCGTGGTGCTCAACAAGGCCGACATGGTGGAGACGCAGCAGCTGATGCGCGTCTACGGCGCGCTCATGT GGGCGCTGGGCAAGGTGGTGGGCACGCCCGAGGTGCTGCGCGTCTACATCGGCTCCTTCTGGTCCCAGCCCCTCC TCGTGCCCGACAACCGGCGCCTCTTCGAGCTGGAGGAGCAGGACCTCTTCCGCGACATCCAGGGCCTGCCCCGGC ACGCAGCCTTGCGCAAGCTCAACGACCTGGTGAAGAGGGCCCGGCTGGTGCGAGTTCACGCTTACATCATCAGCT TCTTTGCGAAGATTCAGCTGGAACATCACATCTCCCCTGGGGACTTTCCTGATTGCCAGAAAATGCAGGAGCTGC TGATGGCGCACGACTTCACCAAGTTTCACTCGCTGAAGCCGAAGCTGCTAGAGGCACTGGACGAGATGCTGACGC CTTTTGAGGGCACCCACATGGGCCCGTTTGTGGAGCGGGGACCTGACGAGGCCATGGAGGACGGCGAGGAGGGCCT CGGACGACGAGGCCGAGTGGGTGGTGACCAAGGACAAGTCCAAATACGACGAGATCTTCTACAACCTGGCGCCTG CCGACGGCAAGCTGAGCGGCTCCAAGGCCAAGACCTGGATGGTGGGGACCAAGCTCCCCAACTCAGTGCTGGGGC TCGAGGCCAAGCTGGAAGGCCACGGGCTGCCCGCCAACCTGCCCGTCGCTGGTGCCACCCTCCAAGCGACGCC ACAAGGGCTCCGCCGAGTGAGCCGGCCCCCCCCCATGGCCCTGCTGTGGCTCCCCAGCTCCAGTCGGCTGCACG CATTCAAATATTTATTGAGCACCTACTATGTGCCCAGCCCTGTTCTAGGCACTGGGCATTACCATAGAGAACAAA ATAGACAAATACATCTGCCCTCATGGAAGGTGACGTTCCCAGGAGAGGGCACCTACACAGTCACGCAAACACACA CTAATTCCTGGCAGGGCCCCCAGCCCCTCCCCTGGCTGAGCAGCCCTGTGGCTGAAATGACTAGCAGATAAACAG

5947/6881 FIGURE 5484A

CTCGTAGCTCCACTCTGCAGCCTCAAACTCCTGGGCTCCAGTGATCCTCTCACCTCAGCCTCCCAAGTAGCTAAG ACCACAGGCACATGCTGCCACCCTGACTAATTTTTCTTTTTTAAAATTTTTTTCTCACTGCGTTGCCCAGGCTG GTCTCAAACTCTTTGGCTCAAGCCATCCATCCTCCTACCTCAGCCTCCCAAAGTGCTGAGATTACAAGCGTGAAC CACCATGCCAGGAGGGAATGTTCTTTCTTGAACGTGGCTGCCCTGTCACCTCAGCATTCTTTGCGGCAGCTGTGG CTTCCGGCAACCACCTGAACCCAGAGCCCAACCAGCCGGCCCCCAGTGTGGACCTAGACTTCCTGGAAGATGACA AGAGCCTCCAAGAGGCCAACATCACGGAGCAGACGCTGGAGGCCGAGGCTGAGCTGGACCTGGGTCCCTTCCAGC TGCCCACCCTGCAGCCTGCGGATGGCGGGGCAGGCCCGACGGGCGGTGGAGGGGCAGCGGCCGTGGCTGCGGGGC CCCAAGCCCTCTTCCCAGGCAGCACCGACCTGCTGGGGGCTGCAGGGCCCGCCTACCGTGCTGACCCACCAGGCCC TGGTGCCGCCCAGGACGTGGTCAACAAGGCCCTGAGTGTGCAGCCCTTCCTGCAGCCTGTGGGCCTGGGCAATG TGACACTGCAGCCCATCCCGGGCCTCCAAGGCCTGCCCAATGGCAGCCCTGGGGGTGCCACGGCGGCCACACTGG GCCTGGCGCCCATCCAGGTGGTGGGCCAGCCGTCATGGCGCTCAACACGCCCACCTCCCAGCTCCTGGCCAAGC AGGTGCCCGTCAGCGGCTACCTGGCCTCGGCGCCTCGGAGCCCGTGACGCTGGCGTCGCCCGGTGTCT CGCCACAGGGGGCTGGCCTGGTCATCCAGAAGAACCTCTCGGCCGCTGTGGCCACCACGCTCAATGGGAACTCTG TGTTCGGAGGCGCGGGGCCCCCCGGCTCCCACCGGGACGCCCTCGGGACAGCCGCTGGCGGTGGCCCCAGGCC TCGGCTCGTCGCCACTGGTCCCGGCGCCCAACGTGATCCTGCATCGCACACCCCACGCCCATCCAGCCCAAGCCCG CGGGGGTGCTGCCGCCCAAGCTCTACCAGCTGACGCCCAAGCCGTTTGCGCCCGCGGGCGCCACGCTCACCATCC AGGGCGAGCCGGGGGCGCTCCCGCAGCCCCAAGGCCCCGCAGAACCTGACGTTCATGGCGGCGGGGAAGGCGG GCCAGAACGTGGTGCTGTCGGGCTTCCCCGCGCCTGCGCTGCAAGCGAACGTCTTCAAGCAGCCACCGGCCACCA CCACCGGAGCGGCCCGCCGCAGCCCCCGGGGCCCTGAGCAAACCCATGAGCGTCCACCTCCTGAACCAAGGCA GCAGCATCGTCATCCCCGCCCAGCACATGCTGCCGGGCCAGAACCAGTTCCTACTGCCTGGCGCCCCGGCGGTCC AGCTCCCGCAGCAGCTCTCAGCCCTGCCGGCCAACGTGGGCGGCAGATCCTGGCGGCCGCTGCCCCCACACAG GTGGACAGCTCATCGCGAACCCCATCCTCACAAACCAGAACCTGGCGGGCCCACTGAGCCTGGGCCCCGTGTTGG CCCCCACTCCGGGGCCCACAGCGCGCACATCCTCTCCGCCGCTCCCATCCAGGTGGGCCAGCCTGCGCTCTTCC CTGTCCTCCAGGGGGTCACCCTGCCCCCAGCGCCGTGGCCATGCTCAACACCCCCGACGGCCTGGTGCAGCCGG CCACCCTGCCGCTGCCACCGGGGAGGCCGCGCCTGTCCTCACGGTGCAGCCTGCCCCCAGGCGCCCCCGCGG TCAGCACACCCCTGCCCCTGGGCCTCCAGCAGCCGCAGGCGCAGCCCCCGCAGGCCCCCACCCCACAGGCCG CCGCCCCGCCTCAGGCCACCCCCCCAGCCCAGCCCTGGCCTGGCGTCTAGCCCGGAGAAGATCGTCCTGGGGC AGCCGCCTCTGCCACCCCCACGGCCATCCTCACTCAGGACTCCCTGCAGATGTTCCTGCCCCAGGAGAGGAGCC AGCAGCCCTCTCCGCAGAGGGCCCCCACCTCTCCGTGCCTGGCTCATAGTCAGCGCCCCGCCTCCCGCCC AAGACCCAGCCCAGCCACCCCGTCGCCAAAGGAGCTGGCCTCGGCCCTCAGGCCCCGACAGCCAGGCTTCCC $\tt CGGCTCCGGCCCCCAGATCCCGGCAGCGGCTCCGCTGAAGGGCCCCAGGCCCCTCTTCGTCCCCGTCACTACCTC$ ACCAGGCCCTCTGGGGGACAGCCCCACCTGCCCTCCCCACACCCCACCCGGCCCCCTTCCCGCCCACCCTCCC GGCCACAGAGTGTGTCCCGCCCTCCCTCAGAGCCACCCTTGCACCCTTGCCCCCCACCCCAGGCCCCCCAACTC TGCCTGGCATCTTTGTCATCCAAAACCAGCTAGGCGTTCCCCCGCCTGCCAGCAACCCGGCCCCTACTGCCCCAG CATCCTCCACCTCCTGTGGCCTCCTCTGAGACGTCCTCCAGGTTGCCAGCCCCTACGCCATCCGACT TCCAGCTCCAGTTCCCACCCAGCCAGGGGCCCCACAAGTCCCCCACTCCCAACCCTCCACCTGGTCCCTG CGAAGGCTCTTCTCGAGAGATTTCACCAGGTGCCGTCCGGAATCATCCTCCAGAACAAGGCTGGGGGGGCCCCTG CCGCCCGCAGACCTCCACCAGCCTGGGGCCCCTCACCAGCCCGCTGCGTCTGTGCTGGTCAGTGGGCAGGCCC CATCTGGGACCCCACTGCCCCAGCCACGCCCCGGCCCCGGCACCCATGGCCGCCACAGGCCTCCTCTCTGC TTCCAGCCGAGAACAAGGCTTTTGCCAGCAACCTCCCGACCCTGAATGTGGCCAAGGCCGCTTCCTCCGGGCCAG GGAAGCCCTCCGGGCTGCAGTATGAGAGCAAACTGAGTGGCCTGAAGAAGCCCCCCCACGCTTCAGCCCAGCAAGG AAGCCTGTTTCCTGGAGCATTTGCACAAACACCAGGGCTCCGTCCTGCACCCCGACTACAAGACGGCCTTCCCCT CCTTTGAGGACGCCCTGCATCGCCTCCCTGCCCTACCATGTCTACCAGGGCGCCCCTCCCCCCAGTGACTACC

5948/6881 FIGURE 5484B

GGCTCCTGCTCCTGGAGGAGTCCCGGAGGGTGAGCCCCTCAGCGGAGATGGTAATGATCGACCGAATGTTCATTC AGGAGGAGAAGACCACCCTTGCCTTGGATAAACAGCTGGCCAAGGAGAAGCCGGACGAGTACGTGTCTTCCTCCC GCTCGCTCGGCCTCCCCATCGCAGCCTCTTCCGAGGGTCATCGGCTTCCCGGCCACGGCCCCCTGTCGTCTTCAG CTCCCGGGGCCTCCACCCAGCCCCTCCACACCTGCCCACCAAGCTTGTGATCCGGCACGGGGGGCAGGCGGCT TGGACGCCGACGAGGACGGCCCCATGCCCTCCCGCAACCGCCCCATCAAGACCTACGAGGCCCGGAGCCGCA TCGGGCTCAAGCTCAAGATCAAGCAGGAAGCCGGGCTCAGCAAGGTCGTGCACAACACGGCCCTGGACCCCGTGC ACCAGCCCCGCCACCCCCGCTACCCTCAAGGTGGCCGAGCCCCCGCCACGGCCGCCACCACCACCGCCGCCCA ACTGCCCGCGCCTGCCACTGCGCAAGACCTACCGCGAGAACGTGGGGGGCCCTGGCGCGCGGAGGGGACGCCCG CCCAAGGCACCGGGGACCCCGACTGGGAGGCGCCCGGGCTGCCCAAGCGGCGCAAGTCCGAGTCGCCCG ACGTGGACCAGGCCAGCTTCTCCAGCGACAGCCCGCAGGATGACACGCTCACCGAGCACCTGCAGAGCGCCATCG GGACGTTGACCAGATAACACCGGGCCGCCTCCCCTTCCCCGTCCCCTCCCCGAAGACGCCGGGACAGTCGGGT GTCCGCCCTCAGCCTCCTGGGGACTCGAGCCGGGGATCCCCTGACGGTTTTTCTTGCCTAAGTTATTTGAGTCAC TGTAAAACGTCTCCCCTGCCAAAGGAGGGGCAAAGTGCTGTGTCAGTTCCTGTTTCTTCCCATTTCCTGGCACAC TCTGCCCTCTGTCCGGGGGACACGCGCATGTGTTTGCCAGGGATGGGGCCACCGGGTTGATGCCAACGCTCCGG GTGCCTGTCTTGTCTGTGTGGCTTCTCAGATGGTGGAGGGTGCTGGGAGCTGGCAGGGTCCTTCCAGACAGTCTC AGTGAGAGATTTCGAACGCCCACCCCTCGACTTTGAAATCTGAGCAAAACAAGAAACTGGGGTCTTCCTCTCCCC

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TTGGCTTGAGCGGGACCGGAGCTGAGGCAGGAAGAGCCGGCGCCATGGTGGAGAAGGAGGAGGCTGGCGGCGGCA TTAGCGAGGAGGAGGCGCACAGTATGACCGGCAGATCCGCCTGTGGGGACTGGAGGCCCAGAAACGGCTGCGGG CCTCTCGGGTGCTTCTTGTCGGCTTGAAAGGACTTGGGGGCTGAAATTGCCAAGAATCTCATCTTGGCAGGAGTGA AAGGACTGACCATGCTGGATCACGAACAGGTAACTCCAGAAGATCCCGGAGCTCAGTTCTTGATTCGTACTGGGT ACACTGAGGATATAGAGAAGAAACCAGAGTCATTTTTCACTCAATTCGATGCTGTGTGTCTGACTTGCTGCTCCA GGGATGTCATAGTTAAAGTTGACCAGATCTGTCACAAAAATAGCATCAAGTTCTTTACAGGAGATGTTTTTTGGCT ACCATGGATACACATTTGCCAATCTAGGAGAGCATGAGTTTGTAGAGGAGAAAACTAAAGTTGCCAAAGTTAGCC AAGGAGTAGAAGATGGGCCCGACACCAAGAGAGCAAAACTTGATTCTTCTGAGACAACGATGGTCAAAAAGAAGG TGGTCTTCTGCCCTGTTAAAGAAGCCCTGGAGGTGGACTGGAGCAGTGAGAAAGCAAAGGCTGCTCTGAAGCGCA CGACCTCCGACTACTTCTCCTTCAAGTGCTCTTAAAGTTCCGTACAGATAAAGGAAGAGATCCCAGTTCTGATA CATATGAGGAAGATTCTGAGTTGTTGCTCCAGATACGAAATGATGTGCTTGACTCACTGGGTATTAGTCCTGACC TGCTTCCTGAGGACTTTGTCAGGTACTGCTTCTCCGAGATGGCCCCAGTGTGTGGGGGGTTGGAGGGATTTTGG CACAGGAAATTGTGAAGGCCCTGTCTCAGCGGGACCCTCCTCACAACAACTTCTTCTTCTTCGATGGCATGAAGG GGAATGGGATTGTGGAGTGCCTTGGCCCCAAGTGAACTCAAGATTTGGCAGCCCCAGAGATGCCAACTGCAGCAT GCCCACCTGTATTCCCTGTCCCCTTCCTTCATGAAGGCATCTCCAGGCAAGGAAAACTGAAGTCATTGGCCCGAT ACAAAACATTTCCTGCAACGAAGGAGGTGGTGCCGACGTGCTGCTTCCCATCACCAGCAGCTGCTCGACAAGGGG CGCAGGGTGGCTGTCTTTGTTCCAGCACTGTTCAGGCTGCCTGTCATCCCGGGCCTGCCAGCTCCCCTGAGTGAT GAGCACTTCCAAGCACCCCTCTGCCCTTTCTCTGTCCTTATGCTGTCCCGGCCTCGCCAGCCCTCTGGGGCATTG TGGGAGATGCCTGCCAGGAATGAGCAAGCTCTGTTGCTCGGGAGCCTCTTGTCACCTTCTTGGACTTATTCCCCA CCTGATACCTTATAGAGAAAAGTGTGAATTCAGGTGGAGAGTAGGCCCCAGGCCCCATGAGGCACCAGTGGAAGCA CAGCTCCAAGTTCAGACAGGTGCCCTTAGAGAGGAAAACCATGACAGGCAAATGCATTTCCTCTGGAGTTTGAGA CCCTGACAAACAACAGGTGGCATCTGGTGTGCTGTTCTTGAGTTTTCGTTTAGGATTAGTTGAGTTCCAGCTGGG TTTTGGGAGAAAGGAGATGCTACCAAGTCTTGGATGTTAGGGCGAGACCCTGCAAGTTGAGTATTAGAGAGCTTG GCGGCTCAAGTCACTCAGAGGCTGTTGCATTTCAGGGCTATGTTGGTCCTTTGTTTACCTCCTAAACCACAGCTG TTTGTGTTTCACATATGTTGTGAATTTTCCTTGGTTCTTTTTAAAGGAATGATAATAAAGTTACTTGCTTTAGGA GAGGCTCTA

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MMEERAAAAVAAAASSCRPLGSGAGPGPTGAAPVSAPAPGPGPAGKGGGGGGSPGPTAGPEPLSLPGILHFIQHE WARFEAEKARWEAERAELQAQVAFLQGERKGQENLKTDLVRRIKMLEYALKQERAKYHKLKFGTDLNQGEKKADV SEQVSNGPVESVTLENSPLVWKEGRQLLRQYLEEVGYTDTILDMRSKRVRSLLGRSLELNGAVEPSEGAPRAPPG PAGLSGGESLLVKQIEEQIKRNAAGKDGKERLGGSVLGQIPFLQNCEDEDSDEDDELDSVQHKKQRVKLPSKALV PEMEDEDEEDDSEDAINEFDFLGSGEDGEGAPDPRRCTVDGSPHELESRRVKLQGVLADLRDVDGLPPKVTGPPP GTPQPRPHEDVFIMDTIGGGEVSLGDLADLTVTNDNDLSCDLSDSKDAFKKTWNPKFTLRSHYDGIRSLAFHHSQ SALLTASEDGTLKLWNLQKAVTAKKNAALDVEPIHAFRAHRGPVLAVAMGSNSEYCYSGGADACIHSWKIPDLSM DPYDGYDPSVLSHVLEGHGDAVWGLAFSPTSQRLASCSADGTVRIWDPSSSSPACLCTFPTASEHGVPTSVAFTS TEPAHIVASFRSGDTVLYDMEVGSALLTLESRGSSGPTQINQVVSHPNQPLTITAHDDRGIRFLDNRTGKPVHSM VAHLDAVTCLAVDPNGAFLMSGSHDCSLRLWSLDNKTCVQEITAHRKKHEEAIHAVACHPSKALIASAGADALAK VFV

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 ${\tt MADQLTEEQIAEFKEAFSLFDKDGDGTITTKELGTVMRSLGQNPTEAELQDMINEVDADGNGTIDFPEFLTMMAR}\\ {\tt KMKDTDSEEEIREAFRVFDKDGNGYISAAELRHVMTNLGEKLTDEEVDEMIREADIDGDGQVNYEEFVQMMTAK}\\$

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 $\tt CCCCTTCCTGTGGGGTTCATTGGGGCATCCCCTTTCTGCTGCAGGAACCTCTCATCAGACCGCCTGAGGGAAGCG$ GCGCCCGGAGACCCGCCCCGGCCCGGTCCACATTCTCCCCAGGAAGCCGGACTCTATGGGGCGGGACCCTGGGGG $\tt TGGGCGAGCCGCCGCCGAGCAGCCATGAGCGAGACGGTCATCTGTTCCAGCCGGGCCACTGTGATGCTTT$ ATGATGATGGCAACAAGCGATGGCTCCCTGCTGGCACGGGTCCCCAGGCCTTCAGCCGCGTCCAGATCTACCACA ACCCCACGGCCAATTCCTTTCGCGTCGTGGGCCGGAAGATGCAGCCCGACCAGCAGGTGGTCATCAACTGTGCCA TCGTCCGGGGTGTCAAGTATAACCAGGCCACCCCCAACTTCCATCAGTGGCGCGACGCTCGCCAGGTCTGGGGCC TCAACTTCGGCAGCAAGGAGGATGCGGCCCAGTTTGCCGCCGGCATGGCCAGTGCCCTAGAGGCGTTGGAAGGAG GTGGGCCCCTCCACCCCAGCACTTCCCACCTGGTCGGTCCCGAACGGCCCCTCCCCGGAGGAGGTGGAGCAGC AGAAAAGGCAGCAGCCCGGCCCGTCGGAGCACATAGAGCGCCGGGTCTCCAATGCAGGAGGCCCACCTGCTCCCC CTGGTGGTGGGGGGCTGGGCCCCAGGCCTGGCCGCAGCTATTGCTGGAGCCAAACTCAGGAAAGTCAGCAAGC AGGAGGAGGCCTCAGGGGGGGCCCACAGCCCCCAAAGCTGAGAGTGGTCGAAGCGGAGGTGGGGGACTCATGGAAG AGATGAACGCCATGCTGGCCCGGAGAAGGAAAGCCACGCAAGTTGGGGAGAAAACCCCCAAGGATGAATCTGCCA ATCAGGAGGAGCCAGAGGCCAGAGTCCCGGCCCAGAGTGAATCTGTGCGGAGACCCTGGGAGAAGAACAGCACAA $\tt CCTTGCCAAGGATGAAGTCGTCTTCTTCGGTGACCACTTCCGAGACCCAACCCTGCACGCCCAGCTCCAGTGATT$ ACTCGGACCTACAGAGGGTGAAACAGGAGCTTCTGGAAGAGGTGAAGAAGGAATTGCAGAAAGTGAAAGAGGAAA TCATTGAAGCCTTCGTCCAGGAGCTGAGGAAGCGGGGTTCTCCCTGACCACAGGGACCCAGAAGACCCGCTTCTC CTTTCCGCACACCCGGCCTGTCACCCTGCTTTCCCTGCCTCTACTTGACTTGGAATTGGCTGAAGACACAGGAAT GCATCGTTCCCACTCCCACTCGGAAAACTCCAAGGGGGTGTGGCTTCCCTGCTCACACCCACACTGGCT GCTGATTGGCTGGGGAGGCCCCCCCCTTTTCTCCCTTTGGTCCTTCCCCTCTGCCATCCCCTTGGGGCCGGTCC GGGGAAAAGGGAAATTTTTTTTTTCTCTTTGGTTTTGATAAAATGGGATGTGGGAGTTTTTAAATGCTATAGCCCT GGGCTTGCCCCATTTGGGGCAGCTATTTAAGGGGAGGGATGTCTCACCGGGCTGGGGGTGAGATATCCCCCCAC CCCAGGGACTCCCTTCCCTCTGGCTCCTTCCCCTTTTCTATGAGGAAATAAGATGCTGTAACTTTTTGGAACCT AGGGAGAAAGGAGAAGGGGAGAAACTTCTCCCCTCCCACCTTCACCTTTAGCTTCTTGAAAATGGGCCCCTGCA GAATAAATCTGCCAGTTTTTATAAAAAAAAAA

 ${\tt MSETVICSSRATVMLYDDGNKRWLPAGTGPQAFSRVQIYHNPTANSFRVVGRKMQPDQQVVINCAIVRGVKYNQATPNFHQWRDARQVWGLNFGSKEDAAQFAAGMASALEALEGGGPPPPPALPTWSVPNGPSPEEVEQQKRQQPGPSEHIERRVSNAGGPPAPPAGGPPPPPGPPPPGPPPPGLPPSGVPAAAHGAGGGPPPAPPLPAAQGPGGGAGAPGLAAAIAGAKLRKVSKQEEASGGPTAPKAESGRSGGGGLMEEMNAMLARRRKATQVGEKTPKDESANQEEPEARVPAQSESVRRPWEKNSTTLPRMKSSSSVTTSETQPCTPSSSDYSDLQRVKQELLEEVKKELQKVKEEIIEAFVQELRKGSP$

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MDPGKDKEGVPQPSGPPARKKFVIPLDEDEVPPGVAKPLFRSTQSLPTVDTSAQAAPQTYAEYAISQPLEGAGAT CPTGSEPLAGETPNQALKPGAKSNSIIVSPRQRGNPVLKFVRNVPWEFGDVIPDYVLGQSTCALFLSLRYHNLHP DYIHGRLQSLGKNFALRVLLVQVDVKDPQQALKELAKMCILADCTLILAWSPEEAGRYLETYKAYEQKPADLLME KLEQDFVSRVTECLTTVKSVNKTDSQTLLTTFGSLEQLIAASREDLALCPGLGPQKARRLFDVLHEPFLKVP

ATTCTTACCTGTCTCTCAAGAATTTCAGACCAATCGACCGTCCTGTCTCTTTAAGGCTTAGGAAGAGCAGTGTG GCTGCCCTTTAAGGAGGCGTTGCAACAAACCATATTGGACAGACGATGGGGGCCGACCCATCGGGACCCGACGGG CCTCTGACTCCAGCAATACAGCGAATCAGCGGCTTTCGGGAATACATTTTTCGGAAAAAGACTTCTTCCTCGGTT TTCTGCTCTGCACACGTTGAAATTTTCCCCAGTTTTTCCTGCAGATCGGGAGTCGAGCAATGCCTACCCCCGCGC TCCCGCACCAGTTGGGCGCTCCCGGATGATGCCCTACCCCTTTGGATCCACGTGGTCTGCAACCTGGTGCGAGCA GCCCGGGCTACAGGGTTGCCTGAGGTGTGGGTCCCAGGATGCAGGAGCCCCAGGCCGGCGATGCTGCTCGGTTCT CTTGTCCCCCCAACTTTACCGCGAAGCCCCCAGCCTCAGAGTCCCCTCGTTTCTCCTTGGAGGCGCTGACGGGTC CAGATACGGAGCTGTGGCTTATTCAGGCCCCTGCAGACTTTGCCCCAGAATGCTTCAATGGGCGGCATGTGCCTC TCTCTGGCTCCCAGATCGTCAAGGGCAAATTGGCAGGCAAGCGGCACCGCTATCGAGTCCTCAGCAGCTGTCCCC AAGCTGGAGAAGCGACCCTGCTGGCCCCCTCAACGGAGGCAGGAGGTGGACTCACCTGTGCCTCAGCCCCCAGG GCACCCTAAGGATCCTTGAGGGTCCCCAGCAATCCCTGTCAGGGAGCCCTCTGCAGCCCATCCCAGCAAGTCCCC CACCACAGATCCCTCCTGGCCTGAGGCCTCGGTTCTGTGCCTTTGGGGGCCAACCCAGTCACAGGGCCTAGGT CAGCCTTGGCCCCCAACCTGCTCACCTCAGGGAAGAAGAAAAAGGAGATGCAGGTGACAGAGGCCCCAGTCACTC AGGAGGCAGTGAATGGGCACGGGGCCCTGGAGGTGGACATGGCTTTGGGGTCGCCAGAAATGGATGTGCGGAAGA AGAAGAAGAAAAAATCAGCAGCTGAAAGAACCAGAGGCAGGGCCTGTGGGGACAGAGCCCACAGTGGAGA AGCCAGAAGACAAGACAGTGAAGCAGGAACAGATTAACACTGAGCCTCTAGAAGACACAGTCCTGTCCCCGACCA AAAAGAGAAAGAGGCAAAAGGGGACGGAAGGGATGGAGCCAGAGGAGGGGGGTGACAGTTGAGTCTCAGCCACAGG CAATGATGGAGCCAGGGACGGAGGCGATGGAGCCAGTGGAGCCGGAGATGAAGCCTCTGGAGTCCCCAGGGGGGA CCATGGCGCCTCAACAGCCAGAAGGAGCGAAGCCTCAGGCCCAGGCAGCTCTGGCAGCTCCCAAAAAGAAGAAGACGA AGAAAGAAAACAGCAAGATGCCACAGTGGAGCCAGAGACAGAGGTGGTGGGGGCCTGAGCTGCCGGATGACCTTG AGCCTCAGGCAGCTCCCACATCCACCAAGAAGAAGAAGAAGAAGAAGAAGAGAGGTCACACAGTGACTGAGCCAA TTCAGCCACTAGAGCCTGAACTGCCAGGGGAGGGACAGCCTGAAGCCAGGGCAACTCCGGGATCCACCAAGAAGA GGAAGAAGCAGAGTCAGGAAAGCCGGATGCCAGAGACAGTGCCCCAAGAGAGATGCCAGGGCCGCCACTGAATT CCCCGGGAAACTGAGGAACTAAAGAAGCTGAAGGTGCCCACCTGGGCCACCAGAAGGTGACACCCCCAGAATC CCTCCCAGAGACTGCACCAGCGCAGCCAGCAGGAGCCTGGCCTGGAGGACGATTTATTATTACACTGGGGGTT TCCTTGGCAGCTGGGGTCATCAGGGTACTTTCAAGAAGGGCTCGTGCAGGACATCAAACAGCCTCCGGGCCTGGA TGGGAGGGAGAAAAAATGAGGAACCAGTCATTAAAGGAGCTGTTTCCTGGGTAAATCTAGAGTGGGGTTTTGGT TTATTATTATTATTTTTTTTTTTTTTTTGAGATGGAGTCTCGCTCTGCCCCAGGTTGGAGTGCAGTGGCGCA ATCTCGGCTCACTGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACT ACAGGCCCTGCCCAGCTAATTTTTTGTATTTTTTTTAGTAGAGATGGGGTTTCACCACGTTAGCCAGGATGGT CTCGATCTCCTGACCTCCTGATGCGCCTCCCAGCCTCCCAGTGCTGGGATTATAGGTGTGAGCCACTGCGCCT GGCTAAGTTATTATTTTTTTTGAGACAGTCTCCTGGTGTCACCCAGGCTGGAGTGCAGTGGTGTGATCTTGGC TCACTGCAACCTCCGCCTCCTGGGTTCCAACGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGCCTAAAGGTGC CCACCACTATACCCGGCTAATTTTTGTATTTTAGTAGAGACAGGGGTTTCACCATATTGGCCAGGCTGGTCTCG AACTCCTGACCTCGTGATCCACCTGCCTTGACCTCCCAAAGTGCTAGGATAACAGGTGTGAGCCACCGCACCCTG CCAAGTTATTTAAAATGTACCATTATTATTGACTATAGTCACCTGGTTGTGTTATCAAATAGTATGTCTTATTC CCCTAACTACCCTCCCAGCCTCCAGGAACTATCCATCCACTCTTATCTCCATGAGTTCAATTGTTTTGATTTTT AGATACACAAATAAATAAGAACATGCAATGTTTGTCTTTCTGTGCCTGGCTTATTTCACTT

MEEPQAGDAARFSCPPNFTAKPPASESPRFSLEALTGPDTELWLIQAPADFAPECFNGRHVPLSGSQIVKGKLAG KRHRYRVLSSCPQAGEATLLAPSTEAGGGLTCASAPQGTLRILEGPQQSLSGSPLQPIPASPPPQIPPGLRPRFC AFGGNPPVTGPRSALAPNLLTSGKKKKEMQVTEAPVTQEAVNGHGALEVDMALGSPEMDVRKKKKKKNQQLKEPE AAGPVGTEPTVETLEPLGVLFPSTTKKRKKPKGKETFEPEDKTVKQEQINTEPLEDTVLSPTKKRKKRQKGTEGME PEEGVTVESQPQVKVEPLEEAIPLPPTKKRKKEKGQMAMMEPGTEAMEPVEPEMKPLESPGGTMAPQQPEGAKPQ AQAALAAPKKKTKKEKQQDATVEPETEVVGPELPDDLEPQAAPTSTKKKKKKKKRGHTVTEPIQPLEPELPGEGQ PEARATPGSTKKRKKQSQESRMPETVPQEEMPGPPLNSESGEEAPTGRDKKRKQQQQQPV

5970/6881 FIGURE 5506A

TCTTCGCGGACGCTGCCCCGGGCAACGATCGGAACTCGGACACGCATGGCACCTTGGGCAGTGGCCGCTCC TCGGACAAAGGCCCGTCCTGGTCCAGCCGCTCACTGGGTGCCCGTTGCCGGAACTCCATCGCCTCCTGTCCCGAG GAGCAGCCCACGTGGGCAACTACCGCCTGCTGAGGACCATTGGGAAGGGCAACTCTGCCAAAGTCAAGCTGGCT CGGCACATCCTCACTGGTCGGGAGGTTGCCATCAAGATTATCGACAAAACCCAGCTGAATCCCAGCAGCCTGCAG AAGCTGTTCCGAGAAGTCCGCATCATGAAGGGCCTAAACCACCCCAACATCGTGAAGCTCTTTGAGGTGATTGAG ACTGAGAAGACGCTGTACCTGGTGATGGAGTACGCAAGTGCTGGAGAAGTGTTTGACTACCTCGTGTCGCATGGC CGCATGAAGGAAGGAAGCTCGAGCCAAGTTCCGACAGATTGTTTCGGCTGTGCACTATTGTCACCAGAAAAAT ATTGTACACAGGGACCTGAAGGCTGAGAACCTCTTGCTGGATGCCGAGGCCAACATCAAGATTGCTGACTTTGGC TTCAGCAACGAGTTCACGCTGGGATCGAAGCTGGACACGTTCTGCGGGAGCCCCCCATATGCCGCCCCGGAGCTG TTTCAGGGCAAGAAGTACGACGGGCCGGAGGTGGACATCTGGAGCCTGGGAGTCATCCTGTACACCCTCGTCAGC GGCTCCCTGCCCTTCGACGGGCACAACCTCAAGGAGCTGCGGGAGCGAGTACTCAGAGGGAAGTACCGGGTCCCT TTCTACATGTCAACAGACTGTGAGAGCATCCTGCGGAGATTTTTGGTGCTGAACCCAGCTAAACGCTGTACTCTC GAGCAAATCATGAAAGACAAATGGATCAACATCGGCTATGAGGGTGAGGAGTTGAAGCCATACACAGAGCCCGAG GAGGACTTCGGGGACACCAAGAGAATTGAGGTGATGGTGGGTATGGGCTACACACGGGAAGAAATCAAAGAGTCC CGGGGCCCCCAGGGCTGGCCCTGGCACGGGTGCGGCCCCAGCGACACCAACGGAACAAGTTCCAGCAAA GGCACCAGCCACAGCAAAGGGCAGCGGAGTTCCTCTTCCACCTACCACCGCCAGCGCAGGCATAGCGATTTCTGT GGCCCATCCCTGCACCCTGCACCCCAAACGCAGCCCGACGACGAGCAGGGGGGAGCTGAAGGAGGAGCGG CTGCCAGGCCGGAAGGCGAGCTGCAGCACCGCGGGGAGTGGGAGTCGAGGGCTGCCCCCTCCAGCCCCATGGTC CCTCCTAGCATGATGACCCGCAGAAACACCTACGTTTGCACAGAACGCCCGGGGGCTGAGCGCCCGTCACTGTTG CCAAATGGGAAAGAAAACAGCTCAGGCACCCCACGGGTGCCCCTGCCTCCCCTCCAGTCACAGCCTGGCACCC CCATCAGGGGAGCGGAGCCGCCTGGCACGCGGTTCCACCATCCGCAGCACCTTCCATGGTGGCCAGGTCCGGGAC CGGCGGCAGGGGGTGGGGGGTGGGGGGTGTGCAGAATGGGCCCCCTGCCTCTCCCACACTGGCCCATGAGGCT GTTACCCTCGATCCCTCTAAACGGCAGAACTCTAACCGCTGTGTTTCGGGCGCCTCTCTGCCCCAGGGATCCAAG ATCAGGTCGCAGACGAACCTGAGAGAATCGGGGGGACCTGAGGTCACAAGTTGCCATCTACCTTGGGATCAAACGG AAACCGCCCCCGGCTGCTCCGATTCCCCTGGAGTGTGAAGCTGACCAGCTCGCGCCCTCCTGAGGCCCTGATGG ACGGGGGTGCGGGCCCGAGCCCCTGTCCCACTTCGAAGTGGAGGTCTGCCAGCTGCCCCGGCCAGGCTTGC GGGGAGTTCTCTTCCGCCGTGTGGCGGGCACCGCCCTGGCCTTCCGCACCCTCGTCACCGCATCTCCAACGACC TCGAGCTCTGAGCCACCACGGTCCCAGGGCCCTTACTCTTCCTCTCCCTTGTCGCCTTCACTTCTACAGGAGGGG AAGGGGCCAGGGAGGGGATTCTCCCTTTATCATCACCTCAGTTTCCCTGAATTATATTTTGGGGGCAAAGATTGTC TGGAGCCTCCAGCCAGTCCTGTCCTCCCTCGCCCTACCAAGAGGGCACCTGAGGAGACTTTGGGGACAGGGCAGG GGCAGGGAGGGAAACTGAGGAAATCTTCCATTCCTCCCAACAGCTCAAAATTAGGCCTTGGGCAGGGCAGGGAG GTCCCCTCACGCTCAAACCCCCACTTCCTGCCCCAGGCTGGCGCGGGGCACTTTGTACAAATCCTTGTAAATACC CCACACCCTCCCCTCTGCAAAGGTCTCTTGAGGAGCTGCCGCTGTCACCTACGGTTTTTAAGTTATTACACCCCG TGACCCTAGGATTTTCCTTCCCTGCCCTCACCTGCAAATGAGTTAAAGAAGAGGCGTGGGAATCCAGGCAGTGGT AAGAAGGCAGGATGGAACTCGGCCTCATCCCCGAGGCCCCAGTTCCTATATCGGGCCCCCCATTCATCCACTCAC ACTCCCAGCCACCATGTTACACTGGACTCTAAGCCACTTCTTACTCCAGTAGTAAATTTATTGCAATAAACAATC 5971/6881 FIGURE 5506B

ATTGAXCCC

MSSRTVLAPGNDRNSDTHGTLGSGRSSDKGPSWSSRSLGARCRNSIASCPEEQPHVGNYRLLRTIGKGNSAKVKL ARHILTGREVAIKIIDKTQLNPSSLQKLFREVRIMKGLNHPNIVKLFEVIETEKTLYLVMEYASAGEVFDYLVSH GRMKEKEARAKFRQIVSAVHYCHQKNIVHRDLKAENLLLDAEANIKIADFGFSNEFTLGSKLDTFCGSPPYAAPE LFQGKKYDGPEVDIWSLGVILYTLVSGSLPFDGHNLKELRERVLRGKYRVPFYMSTDCESILRRFLVLNPAKRCT LEQIMKDKWINIGYEGEELKPYTEPEEDFGDTKRIEVMVGMGYTREEIKESLTSQKYNEVTATYLLLGRKTEEGG DRGAPGLALARVRAPSDTTNGTSSSKGTSHSKGQRSSSSTYHRQRRHSDFCGPSPAPLHPKRSPTSTGEAELKEE RLPGRKASCSTAGSGSRGLPPSSPMVSSAHNPNKAEIPERRKDSTSTPNNLPPSMMTRRNTYVCTERPGAERPSL LPNGKENSSGTPRVPPASPSSHSLAPPSGERSRLARGSTIRSTFHGGQVRDRRAGGGGGGGVQNGPPASPTLAHE AAPLPAGRPRPTTNLFTKLTSKLTRRVTLDPSKRQNSNRCVSGASLPQGSKIRSQTNLRESGDLRSQVAIYLGIK RKPPPGCSDSPGV

GCCCAGCCGGCACCCAATGCCTGGCAGGTCATCAAAGGTGTGCTGTTTAGGATCTTCATCATCTGGGCCATCAGC AGTTGGTTCCGCCGAGGGCCGGCCCCTCAGGACCAGGCGGCCCCGGAGGAGCCCCACGCGTCGCCAGCCGCAAC CTGTTCCCCAAAGACACTTTAATGAACCTGCATGTGTACATCTCAGAGCACGAGCACTTTACAGACTTCAACGCC ACGTCGGCACTCTTCTGGGAACAGCACGATCTTGTGTATGGCGACTAGCGGCGAGAACTCAGACGGCTGC TACGAGCACTTTGCTGAGCTCGATATCCCACAGAGCGTCCAGCAGAACGGCTCCATCTACATCCACGTTTACTTC ACCAAGAGTGGCTTCCACCCAGACCCCCGGCAGAAGGCCCTGTACCGCCGGCTTGCCACAGTCCACATGTCCCGG ATGATCAACAAATACAAGCGCAGACGATTTCAGAAAACCAAGAACCTGCTGACAGGAGAGACAGAAGCGGACCCA GAAATGATCAAGAGGGCTGAGGACTATGGGCCTGTGGAGGTGATCTCCCATTGGCACCCCAACATCACCATCAAC ATCGTGGACGACCACACGCCGTGGGTGAAGGGCAGTGTGCCCCCTCCCCTGGATCAATATGTGAAGTTCGACGCC GTGAGCGGTGACTACTATCCCATCATCTACTTCAATGACTACTGGAACCTGCAGAAGGACTACTACCCCATCAAC GAGAGCCTGGCCAGCCTGCCGCTCCCGCGTCTCCTTCTGCCCACTCTCGCTTTGGCGCTGGCAGCTCTATGCTGCC CAGAGCACCAAGTCGCCCTGGAACTTCCTGGGCGATGAGTTGTACGAGCAGTCAGATGAGGAGCAGGACTCGGTG AAGGTGGCCCTGCTGGAGACCAACCCCTACCTGCTGGCGCTCACCATCATCGTGTCTATCGTTCACAGTGTCTTC GAGTTCCTGGCCTTCAAGAATGATATCCAGTTCTGGAACAGCCGGCAGTCCCTGGAGGGCCTGTCCGTGCGCTCC GTCTTCTTCGGCGTTTTCCAGTCATTCGTGGTCCTCCTCTACATCCTGGACAACGAGACCAACTTCGTGGTCCAG GTCAGCGTCTTCATTGGGGTCCTCATCGACCTCTGGAAGATCACCAAGGTCATGGACGTCCGGCTGGACCGAGAG CACAGGGTGGCAGGAATCTTCCCCCGCCTATCCTTCAAGGACAAGTCCACGTATATCGAGTCCTCGACCAAAGTG TATGATGATATGGCATTCCGGTACCTGTCCTGGATCCTCTTCCCGCTCCTGGGCTGCTATGCCGTCTACAGTCTT CTGTACCTGGAGCACAAGGGCTGGTACTCCTGGGTGCTCAGCATGCTCTACGGCTTCCTGACCTTCGGCTTC ATCACCATGACGCCCCAGCTCTTCATCAACTACAAGCTCAAGTCTGTGGCCCACCTTCCCTGGCGCATGCTCACC TACAAGGCCCTCAACACATTCATCGACGACCTGTTCGCCTTTGTCATCAAGATGCCCGTTATGTACCGGATCGGC TGCCTGCGGGACGATGTGGTTTTCTTCATCTACCTCTACCAACGGTGGATCTACCGCGTCGACCCCACCCGAGTC AACGAGTTTGGCATGAGTGGAGAAGACCCCACAGCTGCCCCCCGTGGCCGAGGTTCCCACAGCAGCAGGGGCC CTCACGCCCACACCTGCACCCACCACGACCACCGCCACCAGGGAGGAGGAGGCCTCCACGTCCCTGCCCACCAAGCCC ACCCAGGGGGCCAGCTCTGCCAGCGAGCCCCAGGAAGCCCCTCCAAAGCCAGCAGAGACAAGAAAAAGGAT<u>TAG</u>

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LPLRVSFCPLSLWRWQLYAAQSTKSPWNFLGDELYEQSDEEQDSVKVALLETNPYLLALTIIVSIVHSVFEFLAF
KNDIQFWNSRQSLEGLSVRSVFFGVFQSFVVLLYILDNETNFVVQVSVFIGVLIDLWKITKVMDVRLDREHRVAG
IFPRLSFKDKSTYIESSTKVYDDMAFRYLSWILFPLLGCYAVYSLLYLEHKGWYSWVLSMLYGFLLTFGFITMTP
QLFINYKLKSVAHLPWRMLTYKALNTFIDDLFAFVIKMPVMYRIGCLRDDVVFFIYLYQRWIYRVDPTRVNEFGM
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MKVLWAALLVTFLAGCQAKVEQAVETEPEPELRQQTEWQSGQRWELALGRFWDYLRWVQTLSEQVQEELLSSQVT QELRALMDETMKELKAYKSELEEQLTPVAEETRARLSKELQAAQARLGADMEDVCGRLVQYRGEVQAMLGQSTEE LRVRLASHLRKLRKRLLRDADDLQKRLAVYQAGAREGAERGLSAIRERLGPLVEQGRVRAATVGSLAGQPLQERA QAWGERLRARMEEMGSRTRDRLDEVKEQVAEVRAKLEEQAQQIRLQAEAFQARLKSWFEPLVEDMQRQWAGLVEK VQAAVGTSAAPVPSDNH

GGCGGCGGCAGCGGGTTCGGTTGCGCGTGGCGCACGGGGTGGGAGCCCAGGCCAGGCCGGGAGCAGGCGCCGCCG GTGGGGCTGCCGCCACCTCCGCCCTCGCCGGGCTTCACGCTGCCGCCGCTGGGAGGCAGCCTGGGCGCCGGC ACCAGTACGAGTCGAAGTTCGGAACGGACCCCCGGGGCTGCAACCGCCAGCGCCTCAGGGGCCCCGAGGATGGG ATGGAGGGTGTCAAGCTCACAGTCAACAAAGGGTTGAGTAACCATTTTCAGGTCAACCACACAGTAGCCCTCAGC ACAATCGGGGAGTCCAACTACCACTTCGGGGTCACATATGTGGGGACAAAGCAGCTGAGTCCCACAGAGGCGTTC CCTGTACTGGTGGGTGACATGGACAACAGTGGCAGTCTCAACGCTCAGGTCATTCACCAGCTGGGCCCCGGTCTC AGGTCCAAGATGGCCATCCAGACCCAGCAGTCGAAGTTTGTGAACTGGCAGGTGGACGGGGAGTATCGGGGCTCT GACTTCACAGCAGCCGTCACCCTGGGGAACCCAGACGTCCTCGTGGGTTCAGGAATCCTCGTAGCCCACTACCTC CAGAGCATCACGCCTTGCCTGGCCCTGGGTGGAGAGCTGGTCTACCACCGGCGGCCTGGAGAGGAGGGCACTGTC ATGTCTCTAGCTGGGAAATACACATTGAACAACTGGTTGGCAACGGTAACGTTGGGCCAGGCGGCATGCACGCA AGCGTCTCCTTCGGGTACCAGCTGGACCTGCCCAAGGCCAACCTCCTCTTCAAAGGCTCTGTGGATAGCAACTGG ATCGTGGGTGCCACGCTGGAGAAGAAGCTCCCACCCCTGCCCCTGACACTGGCCCTTGGGGCCTTCCTGAATCAC $\tt CGCAAGAACAAGTTTCAGTGTGGCTTTGGCCTCACCATCGGC\underline{\textbf{TGA}}GCCCTCCTGGCCCCCGCCTTCCACGCCCTT$ GGGGTCGGGGGGGACATTGGAAAGGAGGGACCCCGCCACCCCAGCAGCTGAGGAGGGGATTCTGGAACTGAAT GGGGCACGCAGGATTCTGAGCACCAGGGGCAGAGGCGGCCAGACAACCTCAGGGAGGAGTGTCCTGGCGTCCCCA TCCTCCAAAGGGCCTGGGCCCGCCCCGAGGGGGCAGCGAGAGGAGCTTCCCCATCCCCGGTCAGTCCACCCTGCC CCGTCCACTTTCCCATCTCCTCGGTATAAATCATGTTTATAAGTTATGGAAGAACCGGGACATTTTACAGAAAAA

MGNVLAASSPPAGPPPPPAPALVGLPPPPPSPPGFTLPPLGGSLGAGTSTSRSSERTPGAATASASGAAEDGACG CLPNPGTFEECHRKCKELFPIQMEGVKLTVNKGLSNHFQVNHTVALSTIGESNYHFGVTYVGTKQLSPTEAFPVL VGDMDNSGSLNAQVIHQLGPGLRSKMAIQTQQSKFVNWQVDGEYRGSDFTAAVTLGNPDVLVGSGILVAHYLQSI TPCLALGGELVYHRRPGEEGTVMSLAGKYTLNNWLATVTLGQAGMHATYYHKASDQLQVGVEFEASTRMQDTSVS FGYQLDLPKANLLFKGSVDSNWIVGATLEKKLPPLPLTLALGAFLNHRKNKFQCGFGLTIG

GAGCAGAACAGGGAGGCTAGAGCGCAGCGGGAACCGGCCCGGAGCCGGAGCCCCACAGGCACCTACTAA TCCTGGAAACCGGAGCCCAGGATGTGCGAGTTCAAGTGCTACCCGAGGTGCGAGGCCAGCTCGGGGGCACCGTGG AGCTGCCGTGCCACCTGCTCCACCTGTTCCTGGACTGTACATCTCCCTGGTGACCTGGCAGCGCCCAGATGCAC CTGCGAACCACCAGAATGTGGCCGCCTTCCACCCTAAGATGGGTCCCAGCTTCCCCAGCCCGAAGCCTGGCAGCG AGCGGCTGTCCTTCGTCTCTGCCAAGCAGAGCACTGGGCAAGACACAGAGGCAGAGCTCCAGGACGCCACGCTGG GAGGGATGACCTGGCTCAGAGTCATAGCCAAGCCCAAGAACCAAGCTGAGGCCCAGAAGGTCACGTTCAGCCAGG ACCCTACGACAGTGGCCCTCTGCATCTCCAAAGAGGGCCGCCCACCTGCCCGGATCTCCTGGCTCTCATCCCTGG ACTGGGAAGCCAAAGAGACTCAGGTGTCAGGGACCCTGGCCGGAACTGTCACTGTCACCAGCCGCTTCACCTTGG TGCCCTCGGGCCGAGCAGATGGTGTCACGGTCACCTGCAAAGTGGAGCATGAGAGCTTCGAGGAACCAGCCCTGA TACCTGTGACCCTCTGTACGCTACCCTCCTGAAGTGTCCATCTCCGGCTATGATGACAACTGGTACCTCGGCC GTACTGATGCCACCCTGAGCTGTGACGTCCGCAGCAACCCAGAGCCCACGGGCTATGACTGGAGCACGACCTCAG GCACCTTCCCGACCTCCGCAGTGGCCCAGGGCTCCCAGCTGGTCATCCACGCAGTGGACAGTCTGTTCAATACCA CCTTCGTCTGCACAGTCACCAATGCCGTGGGCATGGGCCGCGCTGAGCAGGTCATCTTTGTCCGAGAAACCCCCA CTGGGGGGTCCTTGGCCTTCATCCTGCTGAGGGTGAGGAGGAGGAGGAAGAGCCCTGGAGGAGCAGGAGGAGGAG CCAGTGGCGACGGGGGATTCTACGATCCGAAAGCTCAGGTGTTGGGAAATGGGGACCCCGTCTTCTGGACACCAG TAGTCCCTGGTCCCATGGAACCAGATGGCAAGGATGAGGAGGAGGAGGAGGAAGAAGAGAAAAGGCC TCATGTTGCCTCCACCCCAGCACTCGAGGATGACATGGAGTCCCAGCTGGACGGCTCCCTCATCTCACGGCGGG CAGTTTATGTGTGACCTGGACACAGACAGAGACAGAGCCCGGCCCGGCCCTCCCGCCCCGACCTGACCACGCCG GCCTAGGGTTCCAGACTGGTTGGACTTGTTCGTCTGGACGACACTGGAGTGGAACACTGCCTCCCACTTTCTTGG GACTTGGAGGGAGGTGGAACAGCACACTGGACTTCTCCCGTCTCTAGGGCTGCATGGGGAGCCCGGGGAGCTGAG TAGTGGGGATCCAGAGAGACCCCCGCCCCCAGAGACTTGGTTTTGGCTCCAGCCTTCCCCTGGCCCCGTGACAC

MARAAALLPSRSPPTPLLWPLLLLLLETGAQDVRVQVLPEVRGQLGGTVELPCHLLPPVPGLYISLVTWQRPDA PANHQNVAAFHPKMGPSFPSPKPGSERLSFVSAKQSTGQDTEAELQDATLALHGLTVEDEGNYTCEFATFPKGSV RGMTWLRVIAKPKNQAEAQKVTFSQDPTTVALCISKEGRPPARISWLSSLDWEAKETQVSGTLAGTVTVTSRFTL VPSGRADGVTVTCKVEHESFEEPALIPVTLSVRYPPEVSISGYDDNWYLGRTDATLSCDVRSNPEPTGYDWSTTS GTFPTSAVAQGSQLVIHAVDSLFNTTFVCTVTNAVGMGRAEQVIFVRETPRASPRDVGPLVWGAVGGTLLVLLLL AGGSLAFILLRVRRRKSPGGAGGGASGDGGFYDPKAQVLGNGDPVFWTPVVPGPMEPDGKDEEEEEEEKAEKG LMLPPPPALEDDMESQLDGSLISRRAVYV

 ${\tt AGTCTCCGCCGCCGTGAAC}$ GCTCGCAGTCCTGCTGGCGCGCCCCCAGATGCCCAGGCGGAGGTGCGCTTGTCTGTACCCCCGCTGGTGGAGGT GATGCGAGGAAAGTCTGTCATTCTGGACTGCACCCCTACGGGAACCCACGACCATTATATGCTGGAATGGTTCCT TACCGACCGCTCGGGAGCTCGCCCCGCCTAGCCTCGGCTGAGATGCAGGGCTCTGAGCTCCAGGTCACAATGCA GATCGCCACCTGCAACAGCCGGAACGGGAACCCGGCCCCCAAGATCACGTGGTATCGCAACGGGCAGCGCCTGGA GGTGCCCGTAGAGATGAACCCAGAGGGCTACATGACCAGCCGCACGGTCCGGGAGGCCTCGGGCCTGCTCTCCCT CACCAGCACCCTCTACCTGCGGCTCCGCAAGGATGACCGAGACGCCAGCTTCCACTGCGCCGCCCACTACAGCCT GCCCGAGGGCCGCCACGCCTGGACAGCCCCACCTTCCACCTCACCTGCACTATCCCACGGAGCACGTGCA GTTCTGGGTGGCCAGCCGTCCACCCCAGCAGGCTGGGTACGCGAGGGTGACACTGTCCAGCTGCTCTGCCGGGG GGACGGCAGCCCCAGCCCGGAGTATACGCTTTTCCGCCTTCAGGATGAGCAGGAGGAAGTGCTGAATGTGAATCT CGAGGGGAACTTGACCCTGGAGGGGGTGACCCGGGGCCAGAGCGGGACCTATGGCTGCAGAGTGGAGGATTACGA CCTACGCTGGACCAAGGACTCCACTCCCCTGGGCGATGGCCCCATGCTGTCGCTCAGTTCTATCACCTTCGATTC CAATGGCACCTACGTATGTGAGGCCTCCCTGCCCACAGTCCCGGTCCTCAGCCGCACCCAGAACTTCACGCTGCT AGTCACACTCATCTGCTCTGCCCGCGGCCATCCAGACCCCAAACTCAGCTGGAGCCAATTGGGGGGCAGCCCCGC AGAGCCAATCCCCGGACGGCAGGGTTGGGTGAGCAGCTCTCTGACCCTGAAAGTGACCAGCGCCCTGAGCCGCGA TGGCATCTCCTGTGAAGCCTCCAACCCCCACGGGAACAAGCGCCATGTCTTCCACTTCGGCGCCGTGAGCCCCCA GACCTCCCAGGCTGGAGTGGCCGTCATGGCCGTGGCCGTCAGCGTGGGCCTCCTGCTCGTCGTTGCTGTCTT CTACTGCGTGAGACGCAAAGGGGGCCCCTGCTGCCGCCAGCGGCGGGAGAAGGGGGGCTCCGCCGCCAGGGGAGCC AGGGCTGAGCCACTCGGGGTCGGAGCAACCAGAGCAGACCGGCCTTCTCATGGGAGGTGCCTCCGGAGGAGCCAG ${\tt GGGTGGCAGCGGGGGCTTCGGAGACGAGTGC}{\tt TGA}{\tt GCCAAGAACCTCCTAGAGGCTGTCCCTGGACCTGGAGCTGC}$ AGGGTGGGTGGGTGGGAGGGGCCTTCCTCCAGGGAATGTGACTCTCCCAGGCCCCAGAATAGCTCCTGGACCCA AGCCCAAGGCCCAGCCTGGGACAAGGCTCCGAGGGTCGGCTGGCCGGAGCTATTTTTACCTCCCGCCTCCCTGC CCTGCCCCGCCCTACCTCCGCCCCACCCCATCATCTGTGGACACTGGAGTCTGGAATAAATGCTGTTTGTCACA TC

MEPPDAPAQARGAPRILLLAVLLAAHPDAQAEVRLSVPPLVEVMRGKSVILDCTPTGTHDHYMLEWFLTDRSGAR PRLASAEMQGSELQVTMHDTRGRSPPYQLDSQGRLVLAEAQVGDERDYVCVVRAGAAGTAEATARLNVFAKPEAT EVSPNKGTLSVMEDSAQEIATCNSRNGNPAPKITWYRNGQRLEVPVEMNPEGYMTSRTVREASGLLSLTSTLYLR LRKDDRDASFHCAAHYSLPEGRHGRLDSPTFHLTLHYPTEHVQFWVGSPSTPAGWVREGDTVQLLCRGDGSPSPE YTLFRLQDEQEEVLNVNLEGNLTLEGVTRGQSGTYGCRVEDYDAADDVQLSKTLELRVAYLDPLELSEGKVLSLP LNSSAVVNCSVHGLPTPALRWTKDSTPLGDGPMLSLSSITFDSNGTYVCEASLPTVPVLSRTQNFTLLVQGSPEL KTAEIEPKADGSWREGDEVTLICSARGHPDPKLSWSQLGGSPAEPIPGRQGWVSSSLTLKVTSALSRDGISCEAS NPHGNKRHVFHFGAVSPQTSQAGVAVMAVAVSVGLLLLVVAVFYCVRRKGGPCCRQRREKGAPPPGEPGLSHSGS EQPEQTGLLMGGASGGARGGSGGFGDEC

 ${\tt TCCCAGCCGCACCGGTCCTTCCCGGCACACGCGAGGCTCCCATGCCTCTGGCGGTGGCCCCGTGGGGGGCGACAGT}$ ${\tt GGGAAGAGGCCCGGGCCGGGCAGTCAGGATGCTGCAGCGCCTAGAAGAGCAATGCGTCGACCCCGGC}$ TGTCCGTGAGTCCCCTTCGCTGCGGGACCTGCTGCCCCGCACAGCGCAGCTGCTTCGAGAGGTGGCCCATTCTC GGCGGCCGCCGGCGGCCCCCGGGGGTCCCGGCGGCTCTGGGGACTTTCTACTCATCTACCTGGCCAATC TGGAGGCCAAGAGCAGGCGGCGCGCTGCTGCCTCCCCGGGGCCGAAGGAGTGCCAACGACGAGCTCTTCC GGGCGGCTCCAGACTCAGGCGACAGCTGGCCAAGCTGGCCATCATCTTCAGCCACATGCACGCAGAGCTGCACG CACTCTTCCCCGGGGGAAAGTACTGTGGACACATGTACCAGCTCACCAAGGCCCCCGCCCACACCTTCTGGAGGG AAAGTTGCGGAGCCCGGTGTGTGCCCCTGGGCTGAGTTTGAGTCCCTCCTGGGCACCTGCCACCCTGTGGAAC GCTACATGGCCTTCCTCACCTATGATGAGGGTCCAAGAGCGTCTGCAGGCCTGCAGAGACAAGCCAGGCAGTTACA TCTTCCGGCCCAGCTGTACTCGCCTGGGGCAGTGGGCCATCGGCTATGTGAGCTCAGATGGCAGCATCCTGCAGA $\verb|CCATCCCTGCCAACAAACCCCTGTCCCAGGTGCTCCTGGAGGGACAGAAGGACGGCTTCTACCTCTACCCAGATG|\\$ GAAAGACCCACAACCCAGACCTGACTGAGCTCGGCCAGGCAGAACCCCAGCAGCGCATCCACGTGTCAGAGGAGC AGCTGCAGCTCTACTGGGCCATGGACTCCACATTTGAGCTCTGCAAGATCTGTGCTGAGAGCAACAAGGATGTGA CCTTCTGCCGCTGCGAGATCAAGGCCTGGGAGGCCGTGAGTATCTACCAGTTCTACGGTCAGGCTACTGCTGAGG ACTCAGGGAACAGCAGTGACCAGGAAGGCAGGGAGTTGGAGCTGGGGCAGGTGCCCCTTTCGGCTCCTCCATTGC $\verb|CCCCACGGCCAGATCTGCCCCCAGGAAGCCCAGAAATGCCCAGCCGAAAGTGAGACTCCTAAAGGGGAACTCCC|$ CTCCAGCTGCGCTGGGACCCCAGGACCCTGCCCCGGCCTGAAGGCCAGGGCACCCAGATGTGCTGCTCAAGGGAG

MALAVAPWGRQWEEARALGRAVRMLQRLEEQCVDPRLSVSPPSLRDLLPRTAQLLREVAHSRRAAGGGGPGGPGG SGDFLLIYLANLEAKSRQVAALLPPRGRRSANDELFRAGSRLRRQLAKLAIIFSHMHAELHALFPGGKYCGHMYQ LTKAPAHTFWRESCGARCVLPWAEFESLLGTCHPVEPGCTALALRTTIDLTCSGHVSIFEFDVFTRLFQPWPTLL KNWQLLAVTHPGYMAFLTYDEVQERLQACRDKPGSYIFRPSCTRLGQWAIGYVSSDGSILQTIPANKPLSQVLLE GQKDGFYLYPDGKTHNPDLTELGQAEPQQRIHVSEEQLQLYWAMDSTFELCĶICAESNKDVKIEPCGHLLCSCCL AAWQHSDSQTCPFCRCEIKGWEAVSIYQFYGQATAEDSGNSSDQEGRELELGQVPLSAPPLPPRPDLPPRKPRNA QPKVRLLKGNSPPAALGPQDPAPA

GCCCCGTATGCCCCGCGGGCGCATGTGACGAGGGGCCCGTGGACTGCGCCCCACGGCCCAAGGCCACTGGACTCCC GGGCGCCGCGCTGCCGCAAGCGCCCGCTGCGCCGCCCTTCCCCGGAGCCCGCCGCTCCCCGCGGGCGCTG CGGGCCTTGTCGTCCCCTGGACCCTCTGCGGGGGGCGGCTGCGGACCTGCCGGGCCCCCCCACGGCC TGGCCCGCCGGAGGCGTTTACTACCCCGGAGCCTTACTGCCTTTGTACCCCACTCGGGCCATGGGCTCCCCGTT TCCTCTGGTGAACCTGCCTACACCCCTATACCCCATGATGTGCCCCATGGAACACCCCCTTTCTGCTGACATCGC CATGGCCACCCGTGCAGATGAGGACGGAGACACGCCTCTCCATATTGCTGTGGTGCAGGGTAACCTGCCAGCTGT $\tt CCACCTGGCTGTGATCACCACATTACCGTCTGTGGTCCGGCTCCTGGTGACAGCTGGTGCCAGCCCCATGGCGCT$ CAGCGCAGCTCCGGGCACGTTGGACCTGGAGGCCCGCAATTATGACGGGCTCACCGCCCTGCACGTGGCAGTGAA CACCGAGTGCCAAGAAACCGTGCAGCTCTTGCTAGAGCGCGGTGCCGACATCGACGCAGTGGACATTAAGAGCGG CCGCTCCCCGCTCATCCACGCCGTGGAAAACAACAGCCTTAGCATGGTGCAGCTGCTGCTGCAGCACGGCGCCAA $\tt CCGGAGCGCCAACACCTCCCCGAGAGCAGCAGCCGCCTCAGCTCCAATGGTCTTCTCCGCATCACCATCCTC$ AGGAGGCAGCTGAGGGGGATGGGGGGGCAGATCTTGGACTCATGAGGAGGGGCCCCCCTGCCCTGTGGGGTCAAC CCTTCTGGAAACTGTGAAGATCTCACTCTGCCCCCCCCATCTTCGGGACCAGGATTTGCACAGAAGCACATGCA CCTACCCATACACCCCCTCTTCTGAGCACAGATGTTCCCCCATCTCGCTCCCCAGGACTCTGACCCCAGCAT TCTCAGGCACCAGTCCCTGTCCGGAATGCCACCCACATCTTCCATTTCCATGTCCCCTCCCAGAGCTGGTGGACC CAGGGAACAGCCACTCCCCTCCACTCTCTACCAGATAACTGAGGAGGGGAGAGGTGGGCCGTAACGGGCACGGAT ${\tt CACGATGTAAATTATTAAGCATTTTGGTTGGATTTCTTTTGTAATAAACTATTTTTGTACCAT}$

CCGAGGGTCAGGCTGCAGAAGCCCAGAATCCCACCCCAGTCCCCAAGTACAGAGGTCGCTGTCAAGATGGAGTTT CCAACCCAGTAAATCCAAGGGCCAGACCGTGACCTCATAAAGCATCATCCTTCTGTCCAGACTGTGGCAAAAG TATCCAAGCGGCATTCAAATTCTGCCCCTACTGTGGAAATTCTTTGCCTGTAGAGGAGCATGTAGGGTCCCAGAC CTTTGTCAATCCACATGTGTCATCCTTCCAAGGCTCAAAGAGAGGGCTGAACTCCAGTTTTGAAACCTCTCCTAA GAAAGTGAAATGGTCCAGCACCGTCACCTCTCCCCGATTATCCCTCTTCTCAGATGGTGACAGTTCTGAGTCTGA AGATACTCTGAGTTCCTCTGAGAGATCCAAAGGCTCCGGGAGCAGACCCCCAAACCCCCAAAAGCAGCCCTCAGAA GACCAGGAAGAGCCCTCAGGTGACCAGGGGTAGCCCTCAGAAGACCAGCTGTAGCCCTCAGAAGACCAGGCAGAG CCCTCAGACGCTGAAGCGGAGCCGAGTGACCACCTCACTTGAAGCTTTGCCCCACAGGGACAGTGCTGACAAA GAGTGGGCGACAGTGGAAGCTGAAGTCCTTCCAGACCAGGGACAACCAGGGCATTCTCTATGAAGCTGCACCCAC GTTCAATGAGCAGAACTTCTTCCAGCGGGCCGCCAAGCCTCTGCAAGTCAACAAGTGGAAGAAGCTGTACTCGAC CCCACTGCTGGCCATCCCTACCTGCATGGGTTTCGGTGTTCACCAGGACAAATACAGGTTCTTGGTGTTACCCAG CCTGGGGAGGAGCCTTCAGTCGGCCCTGGATGTCAGCCCAAAGCATGTGCTGTCAGAGAGGTCTGTGCTGCAGGT GGCCTGCCGGCTGCTGGATGCCCTGGAGTTCCTCCATGAGAATGAGTATGTTCATGGAAATGTGACAGCTGAAAA TATCTTTGTGGATCCAGAGGACCAGAGTCAGGTGACTTTGGCAGGCTATGGCTTCGCCTATTGCCCAAG TGGCAAACACGTGGCCTACGTGGAAGGCAGCAGGAGCCCTCACGAGGGGGACCTTGAGTTCATTAGCATGGACCT GCACAAGGGATGCGGGCCCTCCCGCCGCAGCGACCTCCAGAGCCTGGGCTACTGCATGCTGAAGTGGCTCTACGG GTTTCTGCCATGGACAAATTGCCTTCCCAACACTGAGGACATCATGAAGCAAAAACAGAAGTTTGTTGATAAGCC GGGGCCCTTCGTGGGACCCTGCGGTCACTGGATCAGGCCCTCAGAGACCCTGCAGAAGTACCTGAAGGTGGTGAT GGCCCTCACGTATGAGGAGAAGCCGCCCTACGCCATGCTGAGGAACAACCTAGAAGCTTTGCTGCAGGATCTGCG AACAGAAAAAAAATGAAGCAATGTGACTCAAGGCCTGCTGTTTAATCACAGATAAGCTTCTAGAACAAGCCCTG GAATGTGCATTCCTGCCACTGGTTTCAGGATACTCATCAGTCCTGATTAGCCTCCGGAGGGCCCCAGTTTCCCTC CCGTGAATGTGAAGTTCCCCATCTTGGTGGCCTGCCCTTCAGCCAGTGTCCTAGCAAAGCTGGATGGGGTTGGGC CGGCCCACAGGGGGGACCCCTCCTACCCTTGACTCCTCTGTGCTTTGGTAATAAATTGTTTTACCAGAG

MISFCPDCGKSIQAAFKFCPYCGNSLPVEEHVGSQTFVNPHVSSFQGSKRGLNSSFETSPKKVKWSSTVTSPRLS LFSDGDSSESEDTLSSSERSKGSGSRPPTPKSSPQKTRKSPQVTRGSPQKTSCSPQKTRQSPQTLKRSRVTTSLE ALPTGTVLTDKSGRQWKLKSFQTRDNQGILYEAAPTSTLTCDSGPQKQKFSLKLDAKDGRLFNEQNFFQRAAKPL QVNKWKKLYSTPLLAIPTCMGFGVHQDKYRFLVLPSLGRSLQSALDVSPKHVLSERSVLQVACRLLDALEFLHEN EYVHGNVTAENIFVDPEDQSQVTLAGYGFAFRYCPSGKHVAYVEGSRSPHEGDLEFISMDLHKGCGPSRRSDLQS LGYCMLKWLYGFLPWTNCLPNTEDIMKQKQKFVDKPGPFVGPCGHWIRPSETLQKYLKVVMALTYEEKPPYAMLR NNLEALLQDLRVSPYDPIGLPMVP

GGCTCTGTAGCCTCGACCCCTTTGTGCCCCCGGCCCGTCTCCGCGCTCACCACGCCTGCGCTCTCCGCTCCCACC TTCTTTCAGCCGAGGCCGCCGCCCTCTCCTTGCTGCAGCCATGGAGTCTTCCACTTTCGCCTTGGTGCCT GTCTTCGCCCACCTGAGCATCCTCCAGAGCCTCGTGCCAGCTGCTGGTGCAGCCTCTCCTGTTGCCATCAGTGCC ${\tt CAGCACCTGTGCTACAGCC} \underline{\textbf{ATG}} \\ \texttt{TCACTCCTGGCGACCCTGGGGCTGGAGCTGGACAGGGCCCTGCTCCCAGCTAG} \\$ TGGGCTGGGATGGCTCGTAGACTATGGGAAACTCCCCCCGGCCCCTGCCCCCTGGCTCCCTATGAGGTCCTTGG GGGAGCCCTGGAGGGCGGCTTCCAGTGGGGGGAGAGCCCCTGGCAGGTGATGGCTTCTCTGACTGGATGACTGA GCGAGTTGATTTCACAGCTCTCCTCCCTCTGGAGCCTCCCCTACCCCCGGCACCCTCCCCCAACCTTCCCCAAC CCCACCTGACCTGGAAGCTATGGCCTCCTCCTCAAGAAGGAGCTGGAACAGATGGAAGACTTCTTCCTAGATGC CCTCCCTCCTTTGACCTCCCCAGCCCCTGTCTTGGATACTCTGGACTTGCTGGCCATCTACTGCCGCAACGA GGCCGGGCAGGAAGTGGGGATGCCGCCTCTGCCCCCGCCACAGCAGCCCCCTCCTCCTCTCTCCACCTCAACC GTCGGCGGCTCTGAGGTACCGCCAGCGGAAGCGGGCAGAGGGTGAGGCCCTGGAGGGCGAGTGCCAGGGGCTGGA GGCACGGAATCGCGAGCTGAAGGAACGGGCAGAGTCCGTGGAGCGCGAGATCCAGTACGTCAAGGACCTGCTCAT CGAGGTTTACAAGGCCCGGAGCCAGAGGACCCGTAGCTGCTAGAAGGGCAGGGGTGTGGCTTCTGGGGGGCTGGTC TTCAGCTCTGGCGCCTTCATCCCCTGCCTCTACCTTCATTCCAAACCCCTCTCGGCCGGGTGCAGTGGCTTATG CTTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGAGGATCGTTTGAGGCCAGGAGGTCAATACCAGCCTGGGCA ACTCTTATCCTTTTATCCTCTGTCTCTGCTTATCACCTCTCTTGCGTATTTCTGGATCTCCTTCCCTCCTTTCTC GTCCAAATCATGAAATGTTTGGCCTTAGTCAATGTCTATGCCCGTCACATAACAGCCGAGGCACCGAGGCCCACA GGGAAGCAGCTGGGAGCTTGGAAACCTGGTCTCTTGAATTTCAAACCTGGTTTCTTACAGGTGGTTGTCTGGGGT GACCCATATCCTACAGGCAAAAAGCAGGCTAGGTGACCTTGGGACACTACGCTAAGGGAGGAGGCTAAAGGCGG GTTCATTTTAGCTCTAAGAAAAAAAACCAGTGTTTCGTGAAGGTGTTGGAGAGGGGCTGTGTCTGGGTGAGGGAT GGCGGGGTACTGATTTTTTTGGGAGGTTATGAGCAAAAATAAAACGAAACATTTCCTCTG

MSLLATLGLELDRALLPASGLGWLVDYGKLPPAPAPLAPYEVLGGALEGGLPVGGEPLAGDGFSDWMTERVDFTA LLPLEPPLPPGTLPQPSPTPPDLEAMASLLKKELEQMEDFFLDAPPLPPPSPPPLPPPPLPPAPSLPLSLPSFDL PQPPVLDTLDLLAIYCRNEAGQEEVGMPPLPPPQQPPPPSPPQPSRLAPYPHPATTRGDRKQKKRDQNKSAALRY RQRKRAEGEALEGECQGLEARNRELKERAESVEREIQYVKDLLIEVYKARSQRTRSC

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5992/6881 FIGURE 5527

GCGACCGTGATTCCCCGCTCGCGACTCCCCACCCCCAGGGCTCCCTAAAGAGGGCCACGAGCTGCGAAAGGGCC GGAAAGGCAGTTGGAGAAGAGGTAAGCGGTTACTCACTCCATGGCTGCAGCAAGGAGAGGCGGCGGCGGCCTCGG CTGAAGAAGAAGGTGGGAGCGGAGAGCGCAGGCGTGAAACCCACCTTGTCCCATCCACATCAGGACATCCCAGC TGGAGTTCAACCTTCATCCCTTCTGTGGCAGTTAGGAGACTGAATCAAGGTCCAGAGAAGGTGGAGGAATCCTGA TACTGAGCGGAAGAAAATACACAGATGTGCTTCCTTCCCAGTCCTGACAAATGGCCTTTCCTTAAGTTCCTCATT AATTCATATGAAGACAACACATTTGGTGACTAAATTTGGAATCAGAGGCTTTTAAAGCCTCCCAGCTGCTCTGAC CCCAATATCAGGAACTTGGCATCTCTGATCTAACAAGGGCACCACTAACAAGGACAAAGCCACCATCATTCACCT TGATTCCGCACATGCCCAACGATGACTTCTGTCCTGGGCTAACCATCAAGGCCATGGGTGCTGAGAGAGCCCCCC AGAGGCAGCCATGCACCCTGCACCTCCTCGTCCCCATCCTCCTCAGCCTGGTGGCCTCCCAGGACTGGA CCTGGGGGCTCAATCGGACCCTGAAGCCCCAGAGGGTGATTGTGGTTGGCGCTGGTGTGGCCGGGCTGGTGGCCG CCAAGGTGCTCAGCGATGCTGGACACAAGGTCACCATCCTGGAGGCAGATAACAGGATCGGGGGCCGCATCTTCA CCTACCGGGACCAGAACACGGGCTGGATTGGGGAGCTGGGAGCCATGCCCAGCTCTCACAGGATCCTCC ACAAGCTCTGCCAGGGCCTGGGGCTCAACCTGACCAAGTTCACCCAGTACGACAAGAACACGTGGACGGAGGTGC ACGAAGTGAAGCTGCGCAACTATGTGGTGGAGAAGGTGCCCGAGAAGCTGGGCTACGCCTTGCGTCCCCAGGAAA AGGGCCACTCGCCCGAAGACATCTACCAGATGGCTCTCAACCAGGCCCTCAAAGACCTCAAGGCACTGGGCTGCA CCGTGCAGCTTCTGGGAGACGTGATGTCCGAGGATGGCTTCTTCTATCTCAGCTTCGCCGAGGCCCTCCGCGCAX CTCGCTGTCCGGGCTTGTGCTGTTGAACGCGCCCGTGGTGGCGATGACCCAGGGACCGCACGATGTGCACGTGCA GATCGAGACCTCTCCCCCGGCGCGGAATCTGAAGGTGCTGAAGGCCGACGTGGTGCTGACGGCGAGCGGACC GGCGGTGAAGCGCATCACCTTCTCGCCGCCGCTGCCCCGCCACATGCAGGAGGCGCTGCGGAGGCTGCACTACGT GCCGGCCACCAAGGTGTTCCTAAGCTTCCGCAGGCCCTTCTGGCGCGAGGAGCACATTGAAGGCGGCCACTCAAA GTCGGACGCGGCGGCAGCGTTCGCCGGCTTGAGCCGGGAAGAGGCGTTGCGCTTGGCGCTCGACGACGTGGCGGC ATTGCACGGGCCTGTCGTGCGCCAGCTCTGGGACGGCACCGGCGTCGTCAAGCGTTGGGCGGAGGACCAGCACAG CCAGGGTGGCTTTGTGGTACAGCCGCCGCCGCCCCTTGGCAAACCGAAAAGGATGACTGGACGGTCCCTTATGGCCG CATCTACTTTGCCGGCGAGCACCCCCTACCCGCACGGCTGGGTGGAGACGGCGGTCAAGTCGGCGCTGCGCGC CGCCATCAAGATCAACAGCCGGAAGGGGCCTGCATCGGACACGGCCAGCCCCGAGGGGCACGCATCTGACATGGA GGGGCAGGGGCATGTGCATGGGGTGGCCAGCAGCCCCTCGCATGACCTGGCAAAGGAAGAAGGCAGCCACCCTCC AGTCCAAGGCCAGTTATCTCTCCAAAACACGACCCACACGAGGACCTCGCATTAAAGTATTTTCGGAAA

GAAGAGGTAAGCGGTTACTCACTCCATGGCTGCAGCAAGGAGGGCGGCGGCGCGCCTCGGCTGAAGAAGAAGAA ATCTTCCCAAGGCTGCAGACACCGACGGATTTGCTTTGGGAGCCAGAGTAGCTGCCGCCACCAGAGTCCGGAGCC ATGAGCGGGTTTAATTTTGGAGGCACTGGGGCCCCTACAGGCGGGTTCACGTTTGGCACTGCAAAGACGGCAACA ACCACACCTGCTACAGGGTTTTCTTTCTCCACCTCTGGCACTGGAGGGTTTAATTTTTGGGGCTCCCTTCCAACCA GCCACAGTACCCCTTCCACCGGCCTGTTCTCACTTGCCACCCAGACTCCGGCCACACAGACGACAGGCTTCACT TTTGGAACAGCGACTCTTGCTTCGGGGGGAACTGGATTTTCTTTGGGGATCGGTGCTTCAAAGCTCAACTTGAGC AACACAGCTGCCACCCCAGCCATGGCAAACCCCAGCGGCTTTGGGCTGGGCAGCAGCCAACCTCACTAATGCCATA TCGAGCACCGTCACCTCCAGCCAGGGCACACCCACCGGCTTTGTGTTTGGCCCCTCCACCACCTCTGTGGCT GCAGGGAATTCAGCCCAGCCCACGGCACCTGCCACGTTGCCCTTCACTCCGGCCACGCCAGCAGCACCACAGCA GGTGCCACACAGCCAGCTGCTCCCACACCCACAGCCACCATCACCAGCACTGGGCCCAGCCTCTTTGCGTCAATA GCAACTGCTCCAACCTCATCTGCCACCACTGGACTCTCCCTCTGTACCCCTGTGACCACAGGGGGCGCCCCCACT GCTGGGACACAGGCTTCAGCTTAAAGGCACCTGGAGCAGCTTCCGGCACCTCCACAACAACATCCACCGCTGCC ACCGCCACCACCACCACCAGCAGCAGCACCACCGGCTTTGCCTTGAATTTAAAACCACTGGCGCCAGCC GGGATCCCCAGCAATACAGCAGCTGCCGTGACCGCTCCACCTGGCCCTGGCGCAGCTGCAGGGGCGGCTGCCAGC TCCGCCATGACCTACGCGCAGCTGGAGAGCCTGATCAACAAATGGAGCCTGGAGCTAGAGGACCAGGAGCGGCAC TTCCTCCAGCAGGCCACCCAGGTCAACGCCTGGGACCGCACGCTGATCGAGAATGGAGAAAAGATCACCAGCCTG CACCGCGAGGTGGAGAAGGTGAAGCTGGACCAGAAGAGGCTGGACCAGGAGCTCGACTTCATCCTGTCCCAGCAG AAGGAGCTGGAAGACCTGCTGAGCCCACTGGAGGAGTTGGTCAAGGAGCAGAGCGGGACCATCTACCTGCAGCAC GCGGATGAGGAGCGTGAGAAAACCTACAAGCTGGCTGAGAACATCGATGCACAGCTCAAGCGCATGGCCCAGGAT CTCAAGGACATCATCGAGCACCTGAACACGTCCGGGGCCCCCGCCGACACCAGTGACCCACTGCAGCAGATCTGC AAGATCCTCAATGCGCACATGGACTCACTGCAGTGGATCGACCAGAACTCGGCCCTGCTGCAGAGGAAGGTGGAG GAGGTGACCAAGGTGTGCGAGGGCCGGCGCAAGGAGCAGGAGCGCAGCTTCCGGATCACCTTTGACTGAGCGACA GCAGCCCTGGGGCCCGCAGGTCCCTAGGGAGTTCATGAGGGGAATGCGCCCTGTTGTCTGTAGTTTGGGGTTGTG GCAAGATACTTGTTTGTTTGTTTCTTTCACA

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5995/6881 FIGURE 5530

CCGGTCAGCTAAGGCCATGTTAATACGGGGCTGTCCCATCTCTCTGCGGGGCGCGACAGCTGGAAGAGCCGAACG GATAAGAGAAGAGGAGGCGCGGATGGCGTCGGGGCGCCCCGAGGAGCTATGCTGCCCATGGTCGAGGAGCCCTG GCGGAGGCAGCGCCGTTGCCTCCACGACATCGCACTGGCCCACAGGGCTGCCACTGCTGCTCGGCCTCCTGCG GAGGACGAGGATGAGCCCACAGAGACAGAGACCTCCGGGGAGCAGCTGGGCATTAGTGATAATGGAGGGCTCTTT GTGATGGATGAGGACGCCACCCTCCAGGACCTTCCCCCCTTCTGTGAGTCAGACCCCGAGAGTACAGATGATGGC AAATATTGAAGTCCAGGGAGGGAGCGCCCGGGCCGCGTCCCCACACTACGCCCCGCCCCACTCCC GGGGCCTGCTAATCTGAGGCCGATCCGGGACCGGCCTCCTTGCGTCTCCCATTCCCAAGATTGTCCCGCCTCTGC GTCGTCTCTCCCGCCTAGCGACAGATTCCTTCTATTAAGGGATTGGCTCGCTGAGTTCTAAGCTCTAAATGGGT CAACTCCTTTGTTTTCCGCCTAGCGACAAGGGATTTGCTCGCACGGCATTGGCTCCATCCCCTAGTCGCTGGACA GCTCTTTTTTGATTGGCTCAAATCCTGTAAAGGGCTTGACCAGTCTCTACATAGTCACCGTCCGCTTTTCCTGA GTTCTCCCTCCCAATTGGCTCCAGCTTCCTGGGGGCCTGGCCAAGCCCTCCTCTTCCCAGAATTGGCCCGGGGCC ${\tt TTCAATTTACGTTCTTTACACTACGGGGACTGGGGTCGTCTTTGCCCACGTCCCGACAACTTGTTCCCTGACCCC}$ $\verb|CCAATCGAAGCCCGTCCCTGCATCCAGGATGGTACCAGCTCCCGCCCCTCGCCCCCACCTCCACAGGTGCCTTA| \\$ AAGGGCCCTCGTCCACCCAAGGTGGGGGGCAGGGGCCCTCACTCTCCCGCCCTGGTGTGGGGGAGAGAGTGAGGG GTTGGGGGATCGGCAGTTGGGAGGGGCGCTCTGAGATTAAAGAGTTTTACCTCTGAGAT

GCCGGGTTGCAGGCGGGCACCTCGGGCAGGACCTCCCTGGTCGGAAGTGGCCGTGAGCCCAAGCCGCGGTCCCG GGCCGGCACCCAGGATGGGCGAGGTGGAGGCCCCGGGCCGCTTGTGGCTCGAGAGCCCCCTGGGGGAGCGCCCCC CATCTTCCTGCCCTCGGACGGGCAAGCCCTGGTCCTGGGCAGGGGACCCCTGACCCAGGTTACGGACCGGAAGTG CTCCAGAACTCAAGCCTGAAGCAGGCCACACTCCCCAGAAATGAGGGACCCAATCACAAGGATGCAAATCCTG ACTCCACCCTCCAATCCTCAGTGGAGCTGGTCGCAGATCCTGAGACCCGGACAGTGGCAGTGAAACAGCTGGGA GTTAACCCCTCAACTACCGGGACCCAGGAGTTGAAGCCGGGGTTGGAGGGCTCTCTGGGGGGTGGGGGACACACTG CCGCCTGGCACCCCTCTGGTGTCCCAAGATGAGAAGAGAGATGCTGAGCTGCCGAAGAAGCCTATGCGGAAGTCA AACCCCGGCTGGGAGAACTTGGAGAAGTTGCTAGTGTTCACCGCAGCTGGGGTGAAACCCCAGGGCAAGGTGGCT GGCTTTGATCTGGACGGGACGCTCATCACCACACGCTCTGGGAAGGTCTTTCCCACTGGCCCCAGTGACTGGAGG ATCTTGTACCCAGAGATTCCCCGTAAGCTCGAGAGCTGGAAGCCGAGGGCTACAAGCTGGTGATCTTCACCAAC CAGATGAGCATCGGGCGGGAAGCTGCCAGCCGAGGAGTTCAAGGCCAAGGTGGAGGCTGTGGTGGAGAAGCTG GGGGTCCCCTTCCAGGTGCTGGTGGCCACGCACGCAGGCTTGTACCGGAAGCCGGTGACGGGCATGTGGGACCAT CTGCAGGAGCAGGCCAACGACGCCCCATATCCATCGGGGACACCATCTTTGTGGGAGACGCAGCCGGACGC CCGGCCAACTGGGCCCCGGGGCGGAAGAAGAAGACTTCTCCTGCGCCGATCGCCTGTTTGCCCTCAACCTTGGC CTGCCCTTCGCCACGCCTGAGGAGTTCTTTCTCAAGTGGCCAGCCGGCTTCGAGCTCCCAGCCTTTGATCCG ${\tt AGGACTGTCTCCCGGTCAGGGCCTCTTTGCCTCCCCGAGTCCAGGGCCCTCCTGAGCGCCAGCCCGGAGGTGGTT}$ GTCGCAGTGGGATTCCCTGGGGCCGGGAAGTCCACCTTTCTCAAGAAGCACCTCGTGTCGGCCGGATATGTCCAC GTGAACAGGGACACGCTAGGCTCCTGGCAGCGCTGTGTGACCACGTGTGAGACAGCCCTGAAGCAAGGGAAACGG GTCGCCATCGACAACACAAACCCAGACGCCGCGAGCCGCCAGGTACGTCCAGTGTGCCCGAGCCGCGGGCGTC CCCTGCCGCTGCTTCCTCTCACCGCCACTCTGGAGCAGGCGCGCCACAACAACCGGTTTCGAGAGATGACGGAC TCCGAGGGCTGAGCCCCGCCCAGCTCCCCTCCACAATAAACGCTGTTTCTCCTTG

GGCTGCGGCTGCAGTGGTGGTGGCGGGTACCGCACGGGGTATCGTCCCCGGGTCCGAGGGCCCGGCCCGCGCCGC GAGCGTGGTGGCCGACGTGGTGTTTGTGATTGAGGGTACGGCCAACCTGGGACCCTACTTCGAGGGGCTCCGCAA GCACTACCTGCTCCCGGCCATCGAGTATTTTAATGGTGGTCCTCCTGCTGAGACGGACTTCGGGGGAGACTATGG GGGGACCCAGTACAGCCTCGTGGTGTTCAACACAGTGGACTGCGCTCCCGAGTCCTACGTACAATGTCACGCTCC CACCAGCAGCCCCTATGAGTTTGTCACCTGGCTCGATGGCATTAAGTTCATGGGCGGGGGTGGTGAGAGCTGCAG CCTCATCGCGGAAGGACTCAGCACAGCCTTGCAGCTGTTTGATGACTTCAAGAAGATGCGCGAGCAGATTGGCCA GACGCACCGGGTCTGCCTCCTCATCTGCAACTCACCCCCATACTTGTTGCCTGCTGTTGAGAGCACCACGTACTC TGGATGCACAACTGAGAATCTTGTGCAGCAGATTGGGGAGCGGGGGATCCACTTCTCCATTGTGTCTCCCCGGAA GCTGCCTGCGCTTCGGCTTCTGTTTGAGAAGGCAGCCCCCCGGCCTTGCTGGAGCCGCTGCAGCCTCCGACAGA TGTGAGCCAGGACCCGAGGCACATGGTGCTGGTTCGGGGACTCGTGCTGCTGTTGGGGGGTGGCTCAGCCCTAGG CCCCCTCCAGTCAAAGCAGCCCAGTCCCCCTGCCTCCCGCCGCACCCTCAGGTGCCACTCTCTCAGCAGCCCCCCA GCAGCCTCTGCCCCCGCTCCCCCGCAGTACCAGGTTCCCGGGAACCTGAGTGCAGCTCAGGTGGCCGCGCAGAA TGCTCCCGGAGTGGGTCCCCCTTCAGCCAGGCCCCAGCTCCCCAACTACCCCCAGGACCCCCTGGCGCCCCCAA GCCACCACCTGCTTCCCAGCCCAGTCTGGTCTCCACTGTGGCCCCTGGCTCCGGCCTGGCTCCCACGGCACAGCC CGGGGCACCGTCCATGGCAGGCACTGTGGCCCCAGGAGGGGTGAGCGGCCCTTCCCCAGCCCAGCTGGGAGCCCC AGCCCTCGGTGGGCAGCAGTCAGTCTCCAATAAGCTTCTGGCCTGGAGCGGGGTCCTGGAGTGGCAAGAAAACC CAAACCTGCCTCAGTGGATGCCAACACCAAGCTGACGCGGTCACTGCCCTGCCAGGTCTACGTGAATCATGGCGA GAACCTGAAGACGGAGCAGTGGCCCCAGAAGCTGATCATGCAGCTCATCCCCCAGCAGCTGCTGACCACCCTGGG CCCTTTGTTCCGGAACTCAAGGATGGTCCAGTTCCATTTCACCAACAAGGACCTGGAGTCTCTCAAAGGCCTCTA CCGCATCATGGGCAACGGCTTCGCGGGCTGCGTGCACTTCCCCCACACGGCGCCCCTGTGAGGTGCGCGTGCTCAT GCTCCTGTACTCGTCCAAGAAGAAGATCTTCATGGGCCTCATCCCCTACGACCAGAGCGGCTTCGTCAACGGCAT ĆCGGCAGGTCATCACCAACCACAAGCAGGTCCAGCAGCAGAAGCTGGAGCAGCAGCAGCAGCAAGGAATGGGGGGACA GCAGGCACCCCCAGGGCTGGGGCCCATTCTGGAGGACCAAGCCAGGCCCTCACAGAATCTGCTCCAGCTCCGCC CACCGCAGCCCCAGCCTCAGGGTACCGTAGGGGCCTCTGGGGCCACGGGGCAGCCCCAAGGTACTGCCC AGCCCCGCCAGGTGCCCCTCAAGGCCCTCCTGGAGCAGCTTCTGGCCCACCCCCTCCTGGACCCATCCTTCGGC CCCAGAACCCTGGGGCCAACCCTCAGCTGCGAAGCCTCCTCCAACCCACCGCCGCAGACTGGGGTGCCCC CACCCCAGGCCTCCCTCCACCACCTGCCCAGTCCTGGCCCGCACAACTTCCCCCTCGGGCTCCACTGCCAGGTAA GGGGACCCGGGGGAGGGCAGAGGTCTGGACTGAGTGTCCCAGCAGCTCCTGGGCTAGAGCACCAAGACCAAGTGC TCCTGGGAAG<u>TAAA</u>GGACATAGGATCCAAGAATGAGGGTTCCCCCAGCCGGCCCTGCAGCCCAGCGTCATGGAGGA AAAA

MVPGSEGPARAGSVVADVVFVIEGTANLGPYFEGLRKHYLLPAIEYFNGGPPAETDFGGDYGGTQYSLVVFNTVD CAPESYVQCHAPTSSAYEFVTWLDGIKFMGGGGESCSLIAEGLSTALQLFDDFKKMREQIGQTHRVCLLICNSPP YLLPAVESTTYSGCTTENLVQQIGERGIHFSIVSPRKLPALRLLFEKAAPPALLEPLQPPTDVSQDPRHMVLVRG LVLPVGGGSALGPLQSKQPVPLPPAAPSGATLSAAPQQPLPPVPPQYQVPGNLSAAQVAAQNAVEAAKNQKAGLG PRFSPITPLQQAAPGVGPPFSQAPAPQLPPGPPGAPKPPPASQPSLVSTVAPGSGLAPTAQPGAPSMAGTVAPGG VSGPSPAQLGAPALGGQQSVSNKLLAWSGVLEWQEKPKPASVDANTKLTRSLPCQVYVNHGENLKTEQWPQKLIM QLIPQQLLTTLGPLFRNSRMVQFHFTNKDLESLKGLYRIMGNGFAGCVHFPHTAPCEVRVLMLLYSSKKKIFMGL IPYDQSGFVNGIRQVITNHKQVQQQKLEQQQRGMGGQQAPPRAGAHSGGPSQALTESAPAPPTAAPASGYRRGLW GHGAAPAPRYCPAPARCPSRPSWSSFWPTPSWTHPSAPEPWGQPSAAKPPPQPTTAADWGAPTPGLPPPPAQSWP AQLPPRAPLPGKGTRGRAEVWTECPSSSWARAPRPSAPGK

GGCACGAGGGCCCTCTGGCGGCTCCGGACCACAGGCCGAGTTACTCTGATTACCGCCATGCTCCAAGACCCGCAC TGACAGTCCCCACGTGAGGGACCGCGGTGGGAGTCCTAAATCGGGGAGGAGGAGGGGGCGCACTGTGCATCTG CTCCCGTTCTCTGTCATCGGTTCCCTCAATGGAGTCCACATGTTTGGGCAGAATCTGGAGGTGCAGCTGAGCTCT GCGAGGACCGAGAACACGACTGTGGTGTGGAAAAGCTTCCATGACAGCATCACCCTCATTGTTCTGTCATCTGAG GTGGGCATCTCTGAGCTGAGGCTGGAGAGACTACTCCAAATGGTGTTTGGAGCCATGGTCCTTCTTGTGGGACTT GAAGAACTGACCAATATCCGCAACGTGGAGAGACTGAAGAAGGACTTGAGGGCCAGTTATTGCCTCATCGACAGC TTCCTGGGGGACTCGGAGCTCATCGGGGACCTGACCCAGTGTGTGGACTGCGTGATTCCTCCAGAGGGGTCCCTC CCGCCGCAGACCGCTCGCGACTACCCGGTGTACCTGCCGCACGGGAGCCCCACGGTCCCACACGCCTCCTGACC CTGACTCTGCTGCCGAGCCTGGAGCTGTGTCTACTCTGCGGGCCCGAGCCCACCCCTCAGCCAGTTGTATCCACAG CTTCTGGAGCGCTGGTGGCAGCCACTGCTGGACCCGTTGCGGGCCTGTCTGCCGTTGGGACCCCGGGCGCTGCCC AGTGGCTTCCCCCTTCACACAGACATCCTCGGGCTGCTCCTCCACCTGGAACTGAAGCGCTGCCTCTTCACC GTGGAGCCCTTGGGGGATAAAGAGCCTTCACCAGAACAGCGCCGCGCCCTCCTCCGAAACTTCTATACCCTGGTC ACCTCCACGCACTTCCCACCAGAGCCAGGGCCACCAGAGAAGACAGAAGATGAGGTCTACCAGGCCCAGCTGCCC AGAGCTTGCTACCTGGTGTTGGGGACTGAGGAACCAGGCACAGGAGTGCGTCTGGTGGCCTTGCAGCTGGGGCTT GCCCTCACCCCACTTCTTTGACTACCTAGCAGTGGGTGATGGACACAGACATGGGGCTGTTAGCGTCTCTGTT TATTCGCTCACAATAATACACAGCCCCTGGATGGGGAGGGGGTAGGAGGGGCTACAACAGGGTGGGGTGGGAGGG AΑ

MGEEGTGGTVHLLCLAASSGVPLFCRSSRGGAPARQQLPFSVIGSLNGVHMFGQNLEVQLSSARTENTTVVWKSF HDSITLIVLSSEVGISELRLERLLQMVFGAMVLLVGLEELTNIRNVERLKKDLRASYCLIDSFLGDSELIGDLTQ CVDCVIPPEGSLLQEALSGFAEAAGTTFVSLVVSGRVVAATEGWWRLGTPEAVLLPWLVGSLPPQTARDYPVYLP HGSPTVPHRLLTLTLLPSLELCLLCGPSPPLSQLYPQLLERWWQPLLDPLRACLPLGPRALPSGFPLHTDILGLL LLHLELKRCLFTVEPLGDKEPSPEQRRRLLRNFYTLVTSTHFPPEPGPPEKTEDEVYQAQLPRACYLVLGTEEPG TGVRLVALQLGLRRLLLLLSPQSPTHGLRSLATHTLHALTPLL

CCCGCCAGCCAGCCTCCCCGCGGCCGGCTCGGCTCCTTGGCGCTGCCTGGGGTCCTTTCCGCCCGGTCCCCGCT TAAGAGAATCAACAAGGAACTGGCCAACATCCGCTCCAAGTTCAAAGGACAAAGCCTTGGATGGCTACAGTAA GAAAAAATATGTGTGTAAACTGCTTTTCATCTTCCTGCTTGGCCATGACATTGACTTTGGGCACATGGAGGCTGT GAATCTGTTGAGTTCCAATAAATACACAGAGAAGCAAATAGGTTACCTGTTCATTTCTGTGCTGGTGAACTCGAA CTCGGAGCTGATCCGCCTCATCAACAACGCCATCAAGAATGACCTGGCCAGCCGCAACCCCACCTTCATGTGCCT GGCCTGCACTGCATCGCCAACGTGGGCAGCCGGGAGATGGGCGAGGCCTTTGCCGCTGACATCCCCCGCATCCT GGTGGCCGGGGACAGCATGGACAGTGTCAAGCAGAGTGCGGCCCTGTGCCTCCTTCGACTGTACAAGGCCTCGCC TGACCTGGTGCCCATGGGCGAGTGGACGGCGCGTGTGGTACACCTGCTCAATGACCAGCACATGGGTGTGGTCAC GGCCGCCGTCAGCCTCATCACCTGTCTCTGCAAGAAGAACCCAGATGACTTCAAGACGTGCGTCTCTCTGGCTGT GTCGCGCCTGAGCCGGATCGTCTCCTCTGCCTCCACCGACCTCCAGGACTACACCTACTACTTCGTCCCAGCACC CTGGCTCTCGGTGAAGCTCCTGCGGCTGCTGCAGTGCTACCCGCCTCCAGAGGATGCGGCTGTGAAGGGGCGGCT GGTGGAATGTCTGGAGACTGTGCTCAACAAGGCCCCAGGAGCCCCCCAAATCCAAGAAGGTGCAGCATTCCAACGC CAAGAACGCCATCCTCTCGAGACCATCAGCCTCATCATCCACTATGACAGTGAGCCCAACCTCCTGGTTCGGGC CTGCAACCAGCTGGGCCAGTTCCTGCAGCACCGGGAGACCAACCTGCGCTACCTGGCCCTGGAGAGCATGTGCAC GCTGGCCAGCTCCGAGTTCTCCCATGAAGCCGTCAAGACGCACATTGACACCGTCATCAATGCCCTCAAGACGGA GCGGGACGTCAGCGTGCGGCAGCGGGCGGCTGACCTCCTCTACGCCATGTGTGACCGGAGCAATGCCAAGCAGAT $\tt CGTGTCGGAGATGCTGCGGTACCTGGAGACGGCAGACTACGCCATCCGCGAGGAGATCGTCCTGAAGGTGGCCAT$ CCTGGCCGAGAAGTACGCCGTGGACTACAGCTGGTACGTGGACACCATCCTCAACCTCATCCGCATTGCGGGCGA $\verb|CTACGTGAGTGAGGGGGTGTGGTACCGTGTCACCAACCGTGATGACGTCCAGGGCTATGCCGC|\\$ CAAGACCGTCTTTGAGGCGCTCCAGGCCCCTGCCTGTCACGAGAACATGGTGAAGGTTGGCGGCTACATCCTTGG GGAGTTTGGGAACCTGATTGCTGGGGACCCCCGCTCCAGCCCCCAGTGCAGTTCTCCCTGCTCCACTCCAAGTT CCATCTGTGCAGCGTGGCCACGCGGGCGCTGCTGCTGCTCCACCTACATCAAGTTCAACCTCTTCCCCGAGAC CAAGGCCACCATCCAGGGCGTCCTGCGGGCCGGCTCCCAGCTGCGCAATGCTGACGTGGAGCTGCAGCAGCGAGC CGTGGAGTACCTCACCTCAGCTCAGTGGCCAGCACCGACGTCCTGGCCACGGTGCTGGAGGAGATGCCGCCCTT CCCCGAGCGCGAGTCGTCCATCCTGGCCAAGCTGAAACGCAAGAAGGGGCCCAGGGGCCCGGCAGCGCCCTGGACGA TGGCCGGAGGGACCCCAGCAGCAACGACATCAACGGGGGCATGGAGCCCACCCCCAGCACTGTGTCGACGCCCTC GCCCTCCGCCGACCTCCTGGGGCTGCGGGCAGCCCCTCCCCCGGCAGCACCCCCGGCTTCTGCAGGAGCAGGGAA CCTTCTGGTGGACGTCTTCGATGGCCCGGCCCCAGCCCAGCCTGGGGCCCACCCCGAGGAGGCCTTCCTCAG TGAGGACATCGGCCCTCCCATTCCGGAAGCCGATGAGTTGCTGAATAAGTTTGTGTGTAAGAACAACGGGGTCCT GTTCGAGAACCAGCTGCTGCAGATCGGAGTCAAGTCAGAGTTCCGACAGAACCTGGGCCGCATGTATCTCTTCTA TGGCAACAAGACCTCGGTGCAGTTCCAGAATTTCTCACCCACTGTGGTTCACCCGGGAGACCTCCAGACTCAGCT GGCTGTGCAGACCAAGCGCGTGGCGGCGCAGGTGGACGGCGGCGCGCAGGTGCAGCAGGTGCTCAATATCGAGTG CCTCCGGGACTTCCTGACGCCCCCGCTGCTGTCCGTGCGCTTCCGGTACGGTGGCGCCCCCAGGCCCTCACCCT GAAGCTCCCAGTGACCATCAACAAGTTCTTCCAGCCCACCGAGATGGCGGCCCAGGATTTCTTCCAGCGCTGGAA GCAGCTGAGCCTCCCTCAACAGGAGGCGCAGAAAATCTTCAAAGCCAACCACCCCATGGACGCAGAAGTTACTAA GGCCAAGCTTCTGGGGTTTGGCTCTGCTCCTGGACAATGTGGACCCCAACCCTGAGAACTTCGTGGGGGCGGG GATCATCCAGACTAAAGCCCTGCAGGTGGGCTGTCTGCTTCGGCTGGAGCCCAATGCCCAGGCCCAGATGTACCG GCTGACCCTGCGCACCAGCAAGGAGCCCGTCTCCCGTCACCTGTGTGAGCTGCTGGCACAGCAGTTCTGAGCCCT GGACTCTGCCCCGGGGGATGTGGCCGGCACTGGGCAGCCCCTTGGACTGAGGCAGTTTTGGTGGATGGGGGACCT CATCCAGGGGCTGTGTATTATTGTGAGCGAATAAACAGAGAGACGCTAA

 ${\tt MPVARSWVCHKTYVTPRRPFEKSRLDQELKLIGNVLLRRLLRIGVLDEGKTKLDYILGLKIEDFLERRLQTQVFK} \\ {\tt LGLAKSIHHAGVLIRQRRVRVRNQVANIPSFIVRLDSQKRIDLSLRSPYGVAAPAA}$

 $\tt GTGGGCAGCCGAGGCCGCAACTGCATC\underline{ATG}GAGAATTTTGTAGCCACCTTGGCTAATGGGATGAGCCTCCAGCC$ GCCTCTTGAAGAAGTGTCCTGTGGCCAGGCGGAAAGCAGTGAGAAGCCCAACGCTGAGGACATGACATCCAAAGA TTACTACTTTGACTCCTACGCACACTTTGGCATCCACGAGGAGATGCTGAAGGACGAGGTGCGCACCCTCACTTA $\tt CCGCAACTCCATGTTTCATAACCGGCACCTCTTCAAGGACAAGGTGGTGCTGGACGTCGGCTCGGGCACCGGCAT$ $\verb|CCTCTGCATGTTTGCTGCCAAGGCCGGGGCCCGCAAGGTCATCGGGATCGTGTGTTCCAGTATCTCTGATTATGC| \\$ GGTGAAGATCGTCAAAGCCAACAAGTTAGACCACGTGGTGACCATCATCAAGGGGAAGGTGGAGGAGGTGGAGCT $\tt CCCAGTGGAGAAGGTGGCATCATCATCAGCGAGTGGATGGGCTACTGCCTCTTCTACGAGTCCATGCTCAACACCC$ GTGCTCTATGCCCGGGACAAGTGTGGCCGCCCGATGGCCTCTTCCCCAGACCGGGCCACGCTGTATGTGACGGC ${\tt CATCGAGGACCGGCAGTACAAAGACTACAAGATCCACTGGTGGGAGAACGTGTATGGCTTCGACATGTCTTGCAT}$ CAAAGATGTGGCCATTAAGGAGCCCCTAGTGGATGTCGTGGACCCCAAACAGCTGGTCACCAACGCCTGCTCAT GAATGACTACGTGCACGCCCTGGTGGCCTACTTCAACATCGAGTTCACACGCTGCCACAAGAGGACCGGCTTCTC GGGCGAGGAGATCTTCGGCACCATCGGCATGCGGCCCAACGCCAAGAACAACCGGGACCTGGACTTCACCATCGA AAGGGGGTTTTAGGGGCCTGGGCTGGGGGATGGGGAGGGCACATCGTGACTGTGTTTTTCATAACTTATGTTTT TATATGGTTGCATTTACGCCAATAAATCCTCAGCTGGG

MENFVATLANGMSLQPPLEEVSCGQAESSEKPNAEDMTSKDYYFDSYAHFGIHEEMLKDEVRTLTYRNSMFHNRH LFKDKVVLDVGSGTGILCMFAAKAGARKVIGIVCSSISDYAVKIVKANKLDHVVTIIKGKVEEVELPVEKVASSS ASGWATASSTSPCSTPCSMPGTSVAPDGLIFPDRATLYVTAIEDRQYKDYKIHWWENVYGFDMSCIKDVAIKEPL VDVVDPKQLVTNACLIKEVDIYTVKVEDLTFTSPFCLQVKRNDYVHALVAYFNIEFTRCHKRTGFSTSPESPYTH WKQTVFYMEDYLTVKTGEEIFGTIGMRPNAKNNRDLDFTIDLDFKGQLCELSCSTDYRMR

AAGTAAGTATCCCCACTTTCAGGGTAGCATCCTCTTTCCCTAGTTATTTCAGTGCAGAATCGATTCACGTGTAAG CCTCTACCTCCTGCACTTACCCCAATGTAGACCCCCTTCCACAGTCCCCCTACAGAAGATCTCCCAAAACATTTC $\tt CGGACGCCACCAACGCTCTCCCGGGCTCTTCCGCGTTACCTACGATGGAAGGTCGGGGCGTGCGGGCAGCTGGAA$ $\tt CCCACCCCTGTCTTGGAGCTCCGGGTAGCTCTCAAACTCGAGGCTGCGCACCCCCTTTCCCGTCAGCTGAGCTCT$ AGAGCGCTGGGGCTTTCTTTTTGATCGACTTCTTGAAATAAAACCAACTTTATCATTCTTTGGGTAACAGACCCA AAAGCCGATGGGACGGCCGCTGGGCTGTTCCCGCCCCTATGCCCTTTTTTTGGGTTTCCGGCCAGAGGCATGCTG AGTGCGCAGGCGCGGGAAAGTTGAACTAATAAAGTTTGTACGAGTTCAGTGGAGGAGACCGCAAGTTGAGTGGAG ${\tt GAGGCGGCGGTGGGGCCCCGGACCAGGTGCCTCCATGGCAGGCTCTGAAGAGCTGGGGCTCCGGGAAGACACGCT}$ GAGGGTCCTAGCTGCCTTCCTTAGGCGTGGTGAGGCTGCCGGGTCTCCTGTTCCAACTCCACCTAGAAGCCCTGC $\verb|CCAAGAAGAGCCAACAGACTTCCTGAGCCGCCTTCGAAGATGTCTTCCCTGCTCCCTGGGGGGAGGAGCAGCCCCC| \\$ CTCTGAGTCCCCTCGGCCTTGCTCTCTCCCCATCCGCCCTGCTATGGTTTAGAGCCTGGCCCAGCTACTCCAGA CTTCTATGCTTTGGTGGCCCAGCGGCTGGAACAGCTGGTCCAAGAGCAGCTGAAATCTCCGCCCAGCCCAGAATT ACAGGGTCCCCCATCGACAGAGAAGGAAGCCATACTGCGGAGGCTGGTGGCCCTGCTGGAGGAGGAGGCAGAAGT CATTAACCAGAAGCTGGCCTCGGACCCCGCCCTGCGCAGCAAGCTGGTCCGCCTGTCCTCCGACTCTTTCGCCCG $\tt CCTGGTGGAGCTGTTCTGTAGCCGGGATGACAGCTCTCGCCCAAGCCGAGCATGCCCCGGGCCCCCGCCTCCTTC$ CGGACTCAGCGTGGAGCACGTGCACAGCTTCACGCCCTGGATCCAGGCCCACGGGGGCTGGGAGGGCATCCTGGC TGTTTCACCCGTGGACTTGAACTTGCCATTGGACTGA

 $\tt GGTTCCAGCTGCCCGCACGCCCCGACCTTCCATCGTAGGCCGGACC\underline{ATG} GGAACCCCAAAGCCACGGATCCTGCC$ $\tt CTGGCTGGTGTCGCAGCTGGACCTGGGGCAACTGGAGGGCGTGGCCTGGGTGAACAAGAGCCGCACGGCTTCCG$ $\verb|CATCCCTTGGAAGCACGGCCTACGGCAGGATGCACAGCAGGAGGATTTCGGAATCTTCCAGGCCTGGGCCGAGGC|\\$ CACTGGTGCATATGTTCCCGGGAGGGATAAGCCAGACCTGCCAACCTGGAAGAGAATTTCCGCTCTGCCCTCAA $\tt CCGCAAAGAAGGGTTGCGTTTAGCAGAGGACCGGAGCAAGGACCCTCACGACCCACATAAAATCTACGAGTTTGT$ GAACTCAGGAGTTGGGGACTTTTCCCAGCCAGACACCTCTCCGGACACCAATGGTGGAGGCAGTACTTCTGATAC CCAGGAAGACATTCTGGATGAGTTACTGGGTAACATGGTGTTGGCCCCACTCCCAGATCCGGGACCCCCAAGCCT GGCTGTAGCCCCTGAGCCCTCAGCCCCTGCGGAGCCCCAGCTTGGACAATCCCACTCCCTTCCCAAACCT GGGGCCCTCTGAGAACCCACTGAAGCGGCTGTTGGTGCCGGGGGAAGAGTGGGAGTTCGAGGTGACAGCCTTCTA CGTGAGGCATGTGCTGAGCTGCCTGGGTGGGGGACTGGCTCTCTGGCGGGCCGGGCAGTGGCTCTGGGCCCAGCG GCTGGGGCACTGCCACACATACTGGGCAGTGAGCGAGGAGCTGCTCCCCAACAGCGGGCATGGGCCTGATGGCGA GGTCCCCAAGGACAAGGAGGAGGCGTGTTTGACCTGGGGCCCTTCATTGTAGATCTGATTACCTTCACGGAAGG AAGCGGACGCTCACCACGCTATGCCCTCTGGTTCTGTGTGGGGGAGTCATGGCCCCAGGACCAGCCGTGGACCAA GAGGCTCGTGATGGTCAAGGTTGTGCCCACGTGCCTCAGGGCCTTGGTAGAAATGGCCCGGGTAGGGGGTGCCTC CTACCTGCAGGACTTGGTGGAGGGCATGGATTTCCAGGGCCCTGGGGAGAGCTGAGCCCTCGCTCCTCATGGTGT GCCTCCAACCCCCTGTTCCCCACCACCTCAACCAATAAACTGGTTCCTGCTATGAA

MGTPKPRILPWLVSQLDLGQLEGVAWVNKSRTRFRIPWKHGLRQDAQQEDFGIFQAWAEATGAYVPGRDKPDLPT WKRNFRSALNRKEGLRLAEDRSKDPHDPHKIYEFVNSGVGDFSQPDTSPDTNGGGSTSDTQEDILDELLGNMVLA PLPDPGPPSLAVAPEPCPQPLRSPSLDNPTPFPNLGPSENPLKRLLVPGEEWEFEVTAFYRGRQVFQQTISCPEG LRLVGSEVGDRTLPGWPVTLPDPGMSLTDRGVMSYVRHVLSCLGGGLALWRAGQWLWAQRLGHCHTYWAVSEELL PNSGHGPDGEVPKDKEGGVFDLGPFIVDLITFTEGSGRSPRYALWFCVGESWPQDQPWTKRLVMVKVVPTCLRAL VEMARVGGASSLENTVDLHISNSHPLSLTSDQYKAYLQDLVEGMDFQGPGES

6009/6881 FIGURE 5544A

GCCAGAGGGGATGCTGAGGGAGATAGTGTGGGGCCCTTGAGGTCTTCATGTCTACTCTACTTCCATCCTTTCT CCCGGGACCTCCACTCCAAACTCTCCCCCCTGGACCCCCAGGTGACCATGGAGGAAGAAGATGAGTCTCGAGGGA TCCTGCGAGCCATCCAGCAGGCTGTGGGAAGCTCCCTGCAGGGGGACCTGCCCAATGATAAAGATGGCTCTCGGT GTCATGGCCTTCGATGGCGGCGCTGCCGGAGTCCACGGTCAGAGCCCCGTTCCCAGGAATCAGGGGGCACTGACA CGGCTACTGTGTTGGACATGGCCACGGACAGCTTCCTCGCAGGGCTGGTGAGTGTCCTGGATCCCCCGGATACCT GGGTTCCCAGCCGCCTGGACCTGCGGCCTGGCGAAAGTGAGGACATGCTGGAGCTGGTGGCTGAGGTCCGAATCG GGGACAGAGATCCCATCCCTCTGCCTGTGCCCAGCCTGCTGCCCCGTCTCAGGGCCTGGAGGACGGGCAAAACGG TTTCTCCACAGTCGAACTCCTCTAGGCCCACCTGTGCCCGTCACCTCACCTTGGGCACGGGAGACGGGGGCCCTG CCCCACCCCTGCCCCTCCTCTGCATCCTCCCCTTCCCCTTCTCCCTCATCTTCCTCCCCTTCCCCTCCCC CACCCCACCGCCCCTGCACCCCAGCCCCACCTGCCCCCGATTCGATATCTATGACCCCTTCCACCCCACCG ACGAGGCCTACTCTCCACCGCCTGCTCCGGAGCAAAAGTACGACCCTTTTGAGCCCACCGGCTCCAACCCCAGCT AGGAGGAGGAAGGCCTGTCCCAGAGCATCAGCCGCATCTCGGAGACCCTGGCGGGCATCTACGATGACAACAGCC TGAGCCAGGACTTCCCAGGTGACGAGAGCCCCCGCCCGGACGCCCACACACCCGACTCCCGCCCCTGGAA CGCCGCCCAGGTGGACTCCACCCGGGCTGATGGAGCCATGCGCCGGCGGGTCTTCGTGGTGGGGACCGAGGCAG AGGCTTGTCGGGAAGGCAAGGTCTCGGTGGAGGTGGTGACCGCTGGTGGAGCCGCCCTCCCGCCGCCCCTGCTGC CGCCCGGCGACTCGGAGATCGAGGAAGGGGAGATCGTCCAGCCGGAGGAGGAGCCCAGGCTGGCGCTGTCCCTCT TCCGCCCGGCCGGCCGGCCTACACCGGCCTCGGCCACCCCCACGGCCCACGCCCTTCCTCAGC $\verb|CTCCCGCTCCGCGGGCCCCCGAGGGGGACGACTTCTTGTCCCTGCATGCGGAGTCGGACGGCGAGGGCGCCCTGC| \\$ AGGTGGACCTAGGGGAGCCGGCTCCCGCGCCCCCCCCGCCGACTCGCGCTGGGGCGGCCTGGACCTGCGCCGCA CCTCGTCGGGCACCCAGCCAGCCGCCCGGCCCCGGCCTCGCCCTGGGACTCCAAGAAGCACCGCTCGCGGGACC GCAAGCCCGCTCCCACGCCTCGTCGTCCGCCCGCCGCTCCCGCTCCCGCTCCCGCTCCCGCTCCACCCGCC GCCGCTCGCGCAGCACCGACCGCCGCGGGGGCAGCCGCAGGTCGCGGTCCCGGGAGAAGCGGCGACGGCGGC GGCGCTCCGCCTCCCGGCCCCCGGCCACTTCCTCATCGTCCTCCTCGAGGCGCGAGCGGCACCGCGGGAAACACCC GGGACGGTGGCGGCAGCAAGAAGAAGAAGAAGCGGTCGCGGTCCCGGGGTGAGAAGCGGTCTGGGGATGGCAGCG TTGACAAGTCCGACCCCCGAGGACCCTCTCCTGCTCCGGCCTCCTCACCTAAGCGGGAGGTCCTGTACGACTCCG AGGGACTGAGCGGCGAGGAGCGGGGGGCGAAGAGCAGCCAGAAGGATCGGCGCCGCCTCGGGGGCCGCCTCCTCCT CCTCCTCTCCCGGGAGAGGGGTCTCGTCGGAAGGCGCTGGACGGGGTGACCGGGATCGGGACAGGGACAGAG AGCCACCAGTCAGCAGCGGCTCAGGCTCTTCATCCTCGTCGTCCTCCTGTTCTTCCCGGAAGGTGAAGCTGCAGT CCAAGGTGGCGGTGCTGATCCGCGAGGGTGTCAGCAGCACCCCCGGCCAAGGATGCCGCGTCAGCCGGCCTGG GCTCCATTGGCGTCAAATTCAGCCGTGACCGCGAGAGTCGCTCCCCCTTCCTCAAACCTGACGAGCGGGCCCCCA CTGAGATGGCCAAAGCAGCTCCGGGCAGCACCAAGCCCAAAAAGACCAAGGTCAAGGCCAAGGCAGGGCCAAGA AAACCAAGGGACCAAGGGAAAGACCAAGCCATCCAAGACCAGGAAAAAGGTCCGCAGTGGAGGTGGCAGCGGGG AGGAGACTTCCTGGTCCGGGGAGGAGCGGGCAGCCAAGGTTCCTAGCACCCCGCCCCCAAGGCAGCCCCACCAC AAGAGGAGGAGCAGCAGCCTGCTACCACCACGGCCACCAGCACTGCTGCAGCCCCCAAGCACTGCCCCCA GCGCGGGGTCCACAGCCGGTGACTCGGGGGCGGAGGACGGCCCAGCTTCCCGTGTCTCCCAGCTGCCCACGTTGC CCCCGCCCATGCCCTGGAATCTGCCAGCTGGTGTGGACTGCACCACCAGCGGCGTCCTGGCCTTGACTGCACTTC

6010/6881 FIGURE 5544B

FIGURE 5545

 ${\tt MSILYFHPFSRDLHSKLSPLDPQVTMEEEDESRGKTEESGEDRGDGPPDRDPTLSPSAFILRAIQQAVGSSLQGD}$ LELVAEVRIGDRDPIPLPVPSLLPRLRAWRTGKTVSPQSNSSRPTCARHLTLGTGDGGPAPPPAPSSASSSPSPS PSSSSPSPPPPPPPPAPPAPPAPPAPRFDIYDPFHPTDEAYSPPPAPEQKYDPFEPTGSNPSSSAGTPSPEEEEEEEE $\tt EEEEEEEEEEEEGLSQSISRISETLAGIYDDNSLSQDFPGDESPRPDAQPTQPTPAPGTPPQVDSTRADGAMRR$ ${\tt RVFVVGTEAEACREGKVSVEVVTAGGAALPPPLLPPGDSEIEEGEIVQPEEEPRLALSLFRPGGRAARPTPAASA}$ TPTAQPLPQPPAPRAPEGDDFLSLHAESDGEGALQVDLGEPAPAPPAADSRWGGLDLRRKILTQRRERYRQRSPS PAPAPAPAAAAGPPTRKKSRRERKRSGEAKEAASSSSGTQPAPPAPASPWDSKKHRSRDRKPGSHASSSARRRSR SRSRSTRRRSRSTDRRRGGSRRSRSREKRRRRRRSASPPPATSSSSSSRRERHRGKHRDGGGSKKKKKKRSRSR GEKRSGDGSEKAPAPAPPPSGSTSCGDRDSRRRGAVPPSIQDLTDHDLFAIKRTITVGRLDKSDPRGPSPAPASS PKREVLYDSEGLSGEERGGKSSQKDRRRSGAASSSSSSREKGSRRKALDGGDRDRDRDRDRDRDRSSKKARPPKE ${\tt SAPSSGPPPKPPVSSGSGSSSSSSSSSSSSRKVKLQSKVAVLIREGVSSTTPAKDAASAGLGSIGVKFSRDRESRSP}$ FLKPDERAPTEMAKAAPGSTKPKKTKVKAKAGAKKTKGTKGKTKPSKTRKKVRSGGGSGGGGGVSLKKSKADSC ${\tt SQAAGTKGAEETSWSGEERAAKVPSTPPPKAAPPPPALTPDSQTVDSSCKTPEVSFLPEEATEEAGVRGGAEEEE}$ EEEEEEEEEEEQQPATTTATSTAAAAPSTAPSAGSTAGDSGAEDGPASRVSQLPTLPPPMPWNLPAGVDCTT ${\tt SGVLALTALLFKMEEANLASRAKAQELIQATNQILSHRKPPSSLGMTPAPVPTSLGLPPGPSSYLLPGSLPLGGC}$ GSTPPTPTGLAATSDKREGSSSSEGRGDTDKYLKKLHTQERAVEEVKLAIKPYYQKKDITKEEYKDILRKAVHKI CHSKSGEINPVKVSNLVRAYVQRYRYFRKHGRKPGDPPGPPRPPKEPGPPDKGGPGLPLPPL

MTRHGKNCTAGAVYTYHEKKKDTAASGYGTQNIRLSRDAVKDFDCCCLSLQPCHDPVVTPDGYLYEREAILEYIL HQKKEIARQMKAYEKQRGTRREEQKELQRAASQDHVRGFLEKESAIVSRPLNPFTAKALSGTSPDDVQPGPSVGP PSKDKDKVLPSFWIPSLTPEAKATKLEKPSRTVTCPMSGKPLRMSDLTPVHFTPLDSSVDRVGLITRSERYVCAV TRDSLSNATPCAVLRPSGAVVTLECVEKLIRKDMVDPVTGDKLTDRDIIVLQRGGTGFAGSGVKLQAEKSRPVMQ A

GAAGGATATTAAAGAGCACCTGCAGGAATTTTTTAAGGGGATGCCGGGGGAAGGGCTTGAAGGAGGAACTAAGGA GGCTTCCAGAAGATTTTGATTAACAGCGAGCGCTAGGGAAGGCCACGGGGATACAGAGGGGTAGGAGGAGGATCC AGAGACCTCCAAGTTGTGGACTCCGGAGGCATCGAGTTCCTTTCCCAGTTTTGTCAAGAATTCCCTGAGCGGCAG CTGGGCCTAGGGCCTGGGGTGTGCCCTGCAACTGGGGGGTGGGGCTGGATGTTCTTGGAGTCAGGGAGCAGCAGC AGCGGAGCGAGGCTGAAGGGAACTTCGTCCTCTCAGCATGGGGGTCCCGCGGCCTCAGCCCTGGGCGCTGGGGGCT CCTGCTCTTCCTCCTGGGAGCCTGGGCGCAGAAAGCCACCTCTCCCTGTACCACCTTACCGCGGTGTC CCTGCGGGGCGAGCCGGAGCCCTGTGGAGCTTGGGTCTGGGAAAACCAGGTGTCCTGGTATTGGGAGAAAGAGAC CACAGATCTGAGGATCAAGGAGAAGCTCTTTCTGGAAGCTTTCAAAGCTTTGGGGGGGAAAAGGTCCCTACACTCT GCAGGGCCTGCTGGGCTGTGAACTGGGCCCTGACAACACCTCGGTGCCCACCGCCAAGTTCGCCCTGAACGGCGA GTGGCAGCAGGACAAGGCGGCCAACAAGGAGCTCACCTTCCTGCTATTCTCCTGCCCGCACCGCCTGCGGGA GCACCTGGAGAGGGCCCGCGAAACCTGGAGTGGAAGGACCCCCCTCCATGCGCCTGAAGGCCCGACCCAGCAG CCCTGGCTTTTCCGTGCTTACCTGCAGCGCCTTCTCCTTCTACCCTCCGGAGCTGCAACTTCGGTTCCTGCGGAA TGGGCTGGCCGCCGGCCCAGGGTGACTTCGGCCCCAACAGTGACGGATCCTTCCACGCCTCGTCGTCACT AACAGTCAAAAGTGGCGATGAGCACCACTACTGCTGCATTGTGCAGCACGCGGGGGCTGGCGCAGCCCCTCAGGGT GGAGCTGGAATCTCCAGCCAAGTCCTCCGTGCTCGTGGTGGGAATCGTCATCGGTGTCTTGCTACTCACGGCAGC GGCTGTAGGAGGAGCTCTGTTGTGGAGAAGGATGAGGAGTGGGCTGCCAGCCCCTTGGATCTCCCTTCGTGGAGA CGACACCGGGGTCCTCCTGCCCACCCCAGGGGAGGCCCAGGATGCTGATTTGAAGGATGTAAATGTGATTCCAGC CACCGCCTGACCATCCGCCATTCCGACTGCTAAAAGCGAATGTAGTCAGGCCCCTTTCATGCTGTGAGACCTCCT TCTGCCTCAGTTTCCCCTCCTAATACATATGGCTGTTTTCCACCTCGATAATATAACACGAGTTTGGGCCC

 $\verb|CCTGGCGGCCATCGTGGCTAAACAGGTACTGCTGGGCCGGAAGGTGGTGGTCGTACGCTGTGAAGGCATCAACAT| \\$ TTCTGGCAATTTCTACAGAAACAAGTTGAAGTACCTGGCTTTCCTCCGCAAGCGGATGAACACCCAACCCTTCCCG AGGCCCCTACCACTTCCGGGCCCCCAGCCGCATCTTCTGGCGGACCGTGCGAGGTATGCTGCCCCACAAAACCAA GCGAGGCCAGGCCGCTCTGGACCGTCTCAAGGTGTTTGACGGCATCCCACCGCCCTACGACAAGAAAAAGCGGAT GGTGGTTCCTGCTGCCCTCAAGGTCGTGCGTCTGAAGCCTACAAGAAAGTTTGCCTATCTGGGGCGCCTGGCTCA CGAGGTTGGCTGGAAGTACCAGGCAGTGACAGCCACCCTGGAGGAGAAGAGAAAAGAGAAAAGCCAAGATCCACTA CCGGAAGAAGAACAGCTCATGAGGCTACGGAAACAGGCCGAGAAGAACGTGGAGAAGAAATTGACAAATACAC ${\tt AGAGGTCCTCAAGACCCACGGACTCCTGGTC} \underline{{\tt TGA}}{\tt GCCCAATAAAGACTGTTAATTCCTCATGCGTTGCCTGCCCT}$ TAGGAAGCTGGGAGCAAGGAAAGGGTCTTAGTCACTGCCTCCCGAAGTTGCTTGAAAGCACTCGGAGAATTGTGC AGGTGTCATTTATCTATGACCAATAGGAAGACCAACCAGTTACTATGAGTGAAAGGGAGCCAGAAGACTGATTGG AGGGCCCTATCTTGTGAGTGGGGCATCTGTTGGACTTTCCACCTGGTCATATACTCTGCAGCTGTTAGAATGTGC AAGCACTTGGGGACAGCATGAGCTTGCTGTTGTACACAGGGTATTTCTAGAAGCAGAAATAGACTGGGAAGATGC ААААААААААААА

 ${\tt MAEVQVLVLDGRGHLLGRLAAIVAKQVLLGRKVVVVRCEGINISGNFYRNKLKYLAFLRKRMNTNPSRGPYHFRAPSRIFWRTVRGMLPHKTKRGQAALDRLKVFDGIPPPYDKKKRMVVPAALKVVRLKPTRKFAYLGRLAHEVGWKYQAVTATLEEKRKEKAKIHYRKKKQLMRLRKQAEKNVEKKIDKYTEVLKTHGLLV$

CGCAGTCTTCGCGGAAAGCGTTCGGGGTAGGCGATGGCTGCGACGCGTGCAGGGCCCCGCGCCCGCGAGATCTTC ACCTCGCTGGAGTACGGACCGGTGCCGGAGAGCCACGCATGCGCACTGGCCTGGACACCCAGGACCGGTGC TTGGGCCACTATGTGAATGGGAAGTGGTTAAAGCCTGAACACAGAAATTCAGTGCCTTGCCAGGATCCCATCACA GAGAGGTTCGAGACGGGGACGTCCAGCTGGCCCAGCAGCTGCTCCACTACCATGCAATCCAGGCATCCACCCAGG AGGAGGCACTGGCAGGCTGGGAGCCC ATG GGAGTAATTGGCCTCATCCTGCCACCCACATTCTCCTTGAGATGATGTGGAGGATTTGCCCTGCCCTGGCTGTGGGCTGCACCGTGGTGGCCCTCGTGCCCCCGGCCTCCCCGGCCGC CCCTCCTCCTGGCCCAGCTGGCGGGGGGGGCCCCTTCCCGGGAATCCTGAATGTCCTCAGTGGCCCTGCGT CCCTGGTGCCCATCCTGGCCTCCCAGCCTGGAATCCGGAAGGTGGCCTTCTGCGGAGCCCCGGAGGAAGGGCGTG CCCTTCGACGGAGCCTGGCGGAGAGTGTGCGGAGCTGGGGCCTGGGGGACGGAGTCGCTGCTGCTGA CGGACACGGCGGACGTAGACTCGGCCGTGGAGGGTGTCGTGGACGCCCGGTCCGACCGCGGCCCGGGTGGCC TCAGGCTCCTCATCCAGGAGTCTGTGTGGGATGAAGCCATGAGACGGCTGCAGGAGCGGATGGGGCGGCTTCGGA GTGGCCGAGGGCTGGATGGGGCCGTGGACATGGGGGCCCGGGGGGCTGCCGCATGTGACCTGGTCCAGCGCTTTG TGCGTGAGGCCCAGAGCCAGGGTGCACAGGTGTTCCAGGCTGGTGATGTGCCTTCGGAACGCCCATTCTATCCCC CAACCTTGGTCTCCAACCTGCCCCCAGCCTCCCCATGTGCCCAGGTGGAGGTGCCGTGGCCTGTGGTCGTGGCCT CCCCCTTCCGCACAGCCAAGGAGGCACTGTTGGTGGCCAACGGGACGCCCCGCGGGGGGCAGCGCCAGTGTGTGGA GCGAGAGGCTGGGCCAGGCTGGAGCTGGGCTATGGGCTCCAGGTGGGCACTGTCTGGATCAACGCCCACGGCC ${\tt TCAGAGACCCTTCGGTGCCCACAGGCGGCTGCAAGGAGAGTGGGTGTTCCTGGCACGGGGGCCCAGACGGGCTGT}$ ATGAGTATCTGCGGCCCTCAGGGACCCCTGCCCGGCTGTCCTGCCTCTCCAAGAACCTGAACTATGACACCTTTG GCCTCGCTGTTCCCTCAACCCTGCCGGCTGGGCCTGAAATAGGGCCCAGCCCAGCACCCCCTATGGGCTCTTCG TTGGGGGCCGTTTCCAGGCTCCTGGGGCCCGAAGCTCCAGGCCCATCCGGGATTCGTCTGGCAACCTCCATGGCT GCCAGTCCCCAGGAGCCCGGGCAGCCCTGCTGTGGGCCCTGGCGGCTGCACTGGAGCGCCGGAAGTCTACCCTGG GGGCGTGGGGGCCCGGGTGCAGGCCCAAGGCCACCCTGCAGGTAGCCGGGCTGAGAGGCCCTGTGCTGCCCC TGCGGGAGCCGCTGGGTGTGCTGGTGTGTCCGGACGAGTGGCCCCTGCTTGCCTTCGTGTCCCTGCTGG CTCCCGCCCTGGCCTACGGCAACACTGTGGTCATGGTGCCCAGTGCGGCCTGTCCTCTGCTGGCCCTGGAGGTCT GCCAGGACATGGCCACCGTGTTCCCAGCAGGCCTGGCCAACGTGGTGACAGGAGACCGGGACCATCTGACCCGCT GCCTGGCCTTGCACCAAGACGTCCAGGCCATGTGGTATTTCGGATCAGCCCAGGGTTCCCAGTTTGTCGAGTGGG CCTCGGCAGGAAACCTCAAACCGGTGTGGGCGAGCAGGGGCTGCCCGCGGGCCTGGGACCAGGAGGCCGAGGGGG CCACCTACTGCATTTTGGACACCTCACACCAAGGGGAGATGCACCCCACAGACACCTGGGACTTTCCCCTTCTGG TTCCTGTGTCTCCCAATAAACTCTCTGACCAACCCTAGCTGTGCTTCTGCGAGAAGAAAGGGTGTAGCAACTTCT GGCAGATATGAGGCTTTTTTTTTTTTTTTTTTTTTTTTGAGACAACGTCTGGCTCTGTCACCCAGGCTGGAGCG CAGTGGCACAATCTCGGCCCACTGCAGCCTCGACCTCTGGGGCTCAAGGGATCCTCATGCCTCAGCCTCATATGT AGCTGGGGCCACAGACATGCACCACCACCTGGCTCGAGGCCATTTTAGTTCTGAGGTTGAGCAGCTCAGGAGC CGGCTCCAGCACGGTGCTGTTTTGTGAAACAGAGAAAGGGGACCCCCGAGGACCCCCAGACAGGGCCTTAGGACT CTCATATCTTCTTGTCTTCTCCATCTGGTGGCTCTTGCTCTCTGGTTTTCTCTACCTTTTCATGGCCCCAGAATC CATATGCAGTAAAGGAACTCTCTGGAATAAAATTAAAGTCCTCCT

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ACAGTTCGGCACGTAGGACGGAGGGTAGTGCGTCTAGAGACACATATTCCCCACGGATTTGACGATGGTGTTCGG TCTTGAATGGAAATGTAGTCTTAGGCCAGTCTTAGGTTTTTGAACAGGATAGTAGGTATCCGGAGTCGATTGAGG ${\tt GCCAGAGCAGGCACTGGGGTTCGGATCCTGGGCAAAGTTTCCCACGTTGAGGGTCTCGAGGACGCCTAGATCTCT}$ $\verb|TTCCCAGGGCC| \textbf{ATC} \\ \texttt{GCGAACCCGAAGCTGCTGGGAATGGGGCTAAGCGAGGCGAGGCGATCGGTGCTGATTCGG} \\$ AAATCCAGCCTCAGCCTGGTTTCTGCATAAAGACCAACTCCTCGGAAGGGAAGGTTTTCATCAACATCTGCCACT $\tt CCCCTCTATCCCTCCCGCCGACGTGACCGAGGAGGAGCTGCTTCAGATGCTAGAGGAGGACCAAGCTGGGT$ TTCGCATCCCCATGAGTCTGGGAGAGCCTCATGCAGAACTGGATGCAAAAGGCCAGGGATGTACCGCCTACGACG TAGCTGTCAACAGCGACTTCTACCGGAGGATGCAGAACAGCGATTTCTTGCGGGAGCTCGTGATCACCATCGCCA GGGAGGGCCTTGAGGACAAATACAACTTGCAGCTGAATCCGGAATGGCGCATGATGAAGAACCGGCCATTCATGG ${\tt GCTCCATCTCGCAGCAGAACATCCGCTCGGAGCAGCGTCCTCGGATCCAGGAGCTGGGGGACCTGTACACGCCCG}$ $\verb|CCCCGGGAGAGCTGAGTCAGGGCCTGAAAAGCCTCACCTGAACCTGTGGCTGGAAGCCCCCGACCTCCTCTTGG|$ ${\tt CCGAAGTTGACCTCCCCAAACTGGATGGAGCCCTGGGGGCTGTCGCTGGAGATCGGGGAGAACCGCCTGGTGATGG}$ GGGGCCCCAGCAGCTGTATCATCTAGACGCTTATATCCCGCTGCAGATCAACTCTCATGAGAGCAAGGCAGCCT ${\tt TCCACCGGAAGAGAAAGCAATTAATGGTGGCCATGCCGCTTCTGCCGGTGCCTTCT} \underline{{\tt TGA}} {\tt TCAGGGTGTCTCCTTG}$ AAAAAAA

 $\label{thm:constraint} $$\operatorname{MANPKLLGMGLSEAEA} igads affeelliqas kelqqaqttrpestqiqpqpgfciktnssegkvfinichspsi\\ pppadvteeellqmleedqagfripmslgephaeldakgqgctaydvavnsdfyrrmqnsdflrelvitiaregl\\ edkynlqlnpewrmknrpfmgsisqqnirseqrpriqelgdlytpapgraesgpekphlnlwleapdlllaevd\\ lpkldgalglsleigenrlvmggpqqlyhldayiplqinsheskaafhrkrkqlmvampllpvps\\$

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 $\tt CGCTTCGGGGCAGGGGTGCGGTCTTGCAATAGGAAGCCGAGCGTCTTGCAAGCTTCCCGTCGGGCACCAGCTACT$ $\tt CGGCCCGCACCCTACCTGGTGCATTCCCTAGACACCTCCGGGGTCCCTACCTGGAGATCCCCGGAGCCCCCCTT$ $\verb|CCTGCGCCAGCC| \textbf{ATG} \verb|CCTTTAAACCGCACTTTGTCCATGTCCTCACTGCCAGGACTGGAGGACTGGGAGGATGAA| \\$ CTGCAGACGAAGGCGAAGGTGACAGGGGACGAATGGGGCGACAACTACTTCCTGGTGGGGCCGTACACGGAGCAG GGCGTGAGGACCCAGGTGGAACTGCTGGAGGCCCCCACCCCGGCCCTGAAGAGGACACTGGATTCCATGAACAGC TCAGCTTGGGCCCTGGAGCGCTGGAAGGGAGGCTCTGGGATACCTGCAACATCGGAGTGCCGTGGTACGACCGC GAGGCCAACGACGCTGTCCTCTTTGGCTTTCTGACCACCTGGTTCCTGGGTGAGTTCCTGGCACAGAGTGAGGAG AAGCCACATGTGGTTGCTCACTTCCATGAGTGGTTGGCAGGCGTTGGACTCTGCCTGTGTCGTGCCCGGCGACTG CCTGTAGCAACCATCTTCACCACCCATGCCACGCTGCTGGGGGCGCTACCTGTGTGCCGGTGCCGTGGACTTCTAC AACAACCTGGAGAACTTCAACGTGGACAAGGAAGCAGGGGAGAGGCAGATCTACCACCGATACTGCATGGAAAGG GCGGCAGCCCACTGCGCTCACGTCTTCACTACTGTGTCCCAGATCACCGCCATCGAGGCACAGCACTTGCTCAAG CATGCTCAGAGCAAGGCTCGAATCCAGGAGTTTGTGCGGGGCCATTTTTATGGGCATCTGGACTTCAACTTGGAC AAGACCTTATACTTCTTTATCGCCGGCCGCTATGAGTTCTCCAACAAGGGTGCTGACGTCTTCCTGGAGGCATTG GCTCGGCTCAACTATCTGCTCAGAGTGAACGGCAGCGAGCAGACAGTGGTTGCCTTCTTCATCATGCCAGCGCGG ACCAACAATTTCAACGTGGAAACCCTCAAAGGCCAAGCTGTGCGCAAACAGCTTTGGGACACGGCCAACACGGTG AAGGAAAAGTTCGGGAGGAAGCTTTATGAATCCTTACTGGTTGGGAGCCTTCCCGACATGAACAAGATGCTGGAT AAGGAAGACTTCACTATGATGAAGAGAGCCATCTTTGCAACGCAGCGGCAGTCTTTCCCCCCTGTGTGCACCCAC AATATGCTGGATGACTCCTCAGACCCCATCCTGACCACCATCCGCCGAATCGGCCTCTTCAATAGCAGTGCCGAC AGGGTGAAGGTGATTTTCCACCCGGAGTTCCTCCTCCACAAGCCCCCTGCTCCCTGTGGACTATGAGGAGTTT GTCCGTGGCTGTCACCTTGGAGTCTTCCCCTCCTACTATGAGCCTTGGGGCTACACACCGGCTGAGTGCACGGTT ATGGGAATCCCCAGTATCTCCACCAATCTCTCCGGCTTCGGCTGCTTCATGGAGGAACACATCGCAGACCCCTCA TACAGTTTCTGTCAGCAGAGCCGGCGGCAGCGTATCATCCAGCGGAACCGCACGGAGCGCCTCTCCGACCTTCTG GACTGGAAATACCTAGGCCGGTACTATATGTCTGCGCGCCACATGGCGCTGTCCAAGGCCTTTCCAGAGCACTTC ACCTACGAGCCCAACGAGGCGGATGCAGGCCCAGGGGTACCGCTACCCACGGCCAGCCTCGGTGCCACCGTCGCC CTCGCTGTCACGACACTCCAGCCCGCACCAGAG<u>TGA</u>GGACGAGGAGGATCCCCGGAACGGCCGCTGGAGGAAGA CGGCGAGCGCTACGATGAGGACGAGGAGGCCGCCAAGGACCGGCGCAACATCCGTGCACCAGAGTGGCCGCGCCG CTGTCCTGCCTCTGCTCCAGAGAGAGGATGCAGAGGGGTGCTGCTCCTAAACCCCCGCTCCAGATCTGCACTG GGTGTGCCCCGCAGTGCCCCACCCAGTCCGCCAAACACTCCACCCCTCCAGCTCCAGTTTCCAAGTTCCTGC ACTCCAGAATCCACAAAGCCGTGCCTTTCTCTGGCTCCAGAATATGCATAATCAGCGCCCTGGAGTCCCCTGGGC CTGGACCGCTTCCCAGAGGCCAGGAATCTGCCATTACTCTGCGGTGGTGCCAGAGGTTTTAGGAAACCTGGCATG GTGCTTTCAGGTCTGGGGCTTTTAGAGCCCCCCGTGTGGCTTACAAATTCTACAGCATACAGAGCAGGCCACGCT CAGGCCCGGCATGCGGGCCACCAAGTTCTGGAAACCACGTGGTGTCCCTGCGAATGGGGCGATCAAGTCCAGAGC $\tt CGGGGCACTTTCAGAGTTTGAAGGTAACTGAGAGCAGATGGTCCTCCATTTCAACTCCAGAAGTGGGGCTCTGGG$ AGGGATGTTCTAGCCCTCCCTGGCATGTCAGAGCCAGGCTCTGCCTGGAGGATCCCTCCATCCGGCTCCTGTCAT CCCCTACACTTTGGCCAAGCAAGAGGTGGTAGAACCACTTGGCTGCTCATTCCTTCTGGAGGACACACAGTCTCA GTCCAGATGCCTTCCTGTCTTTCTGGCCCTTTCTGGACCAGATCCTACTCTTCTTCTAAATCTGAGATCTCCC TCCAGGGAATCCGCCTGCAGAGGACAGAGCTGGCTGTCTTCCCCCACCCCTAACCTGGCTTATTCCCAACTGCTC TGCCCACTGTGAAACCACTAGGTTCTAGGTCCTGGCTTCTAGATCTGGAACCTTACCACGTTACTGCATACTGAT CCCTTTCCCATGATCCAGAACTGAGGTCACTGGGTTCTAGAACCCCCACATTTACCTCGAGGCTCTTCCATCCCC AAACTGTGCCCTGCCTTCAGCTTTGGTGAAAGGGAGGCCCCTCATGTGTGCTGTGCTGTGTCTGCACCGCTTGG **TATTTAAG**

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SISTNLSGFGCFMEEHIADPSAYGIYILDRRFRSLDDSCSQLTSFLYSFCQQSRRQRIIQRNRTERLSDLLDWKY
LGRYYMSARHMALSKAFPEHFTYEPNEADAGPGVPLPTASLGATVALAVTTLQPAPE

 ${\tt MSSQIRQNYSTDVEAAVNSLVNLYLQASYTYLSLGFYFDRDDVALEGVSHFFRELAEEKREGYERLLKMQNQRGG} \\ {\tt RALFQDIKKPAEDEWGKTPDAMKAAMALEKKLNQALLDLHALGSARTDPHLCDFLETHFLDEEVKLIKKMGDHLT} \\ {\tt NLHRLGGPEAGLGEYLFERLTLKHD} \\$

MDGSGEQPRGGGPTSSEQIMKTGALLLQGFIQDRAGRMGGEAPELALDPVPQDASTKKLSECLKRIGDELDSNME LQRMIAAVDTDSPREVFFRVAADMFSDGNFNWGRVVALFYFASKLVLKALCTKVPELIRTIMGWTLDFLRERLLG WIQDQGGWVRLLKPPHPHHRALTTAPAPPSLPPATPLGPWAFWSRSQWCPLPIFRSSDVVYNAFSLRV

TGCTGCTCCTGCTTCGCGCCGTGCTGGCTGTCCCCCTGGAGCGAGGGGGCGCCCAACAAGGAGGAGACCCCTGCGA CTGAGAGTCCCGACACAGGCCTGTACTACCACCGGTACCTCCAGGAGGTCATCGATGTACTGGAGACGGATGGGC ATTTCCGAGAGAAGCTGCAGGCTGCCAATGCGGAGGACATCAAGAGCGGGAAGCTGAGCCGAGAGCTGGACTTTG TCAGCCACCACGTCCGCACCAAGCTGGATGAGCTCAAGCGACAGGAGGTGTCACGGCTGCGGATGCTGCAAGG CCAAGATGGACGCCGAGCAGGATCCCAATGTACAGGTGGATCATCTGAATCTCCTGAAACAGTTTGAACACCTGG ACCCTCAGAACCAGCATACATTCGAGGCCCGCGACCTGGAGCTGCTGATCCAGACGGCCACCCGGGACCTTGCCC AGTCACTGGGAGAGGAGCAGAAAGGAGGGGGGAGAGGAGGAGGAGAGAGCAACAGCGCGGCACCGCGAGCACC CTAAAGTCAACGTGCCTGGCAGCCAAGCCCAGTTGAAGGAGGTGTGGGAGGAGGTGGACTGGACCCCAACA GGTTTAACCCCAAGACCTTCTTCATACTGCATGATATCAACAGTGATGGTGTCCTGGATGAGCAGGAGCTGGAGG CACTCTTCACCAAGGAGCTGGAGAAAGTGTACGACCCAAAGAATGAGGAGGACGACATGCGGGAGATGGAGGAGG ${\tt TCCTCGCATCCACTCAGAGGAAGGAGTTTGGGGACACCGGGGAGGGCTGGGAGACAGTGGAGATGCACCCTGCCT}$ ACACCGAGGAAGAGCTGAGGCGCTTTGAAGAGGAGCTGGCCGGGAGGCAGAGCTGAATGCCAAGGCCCAGC CTGTGCTGCACATGGAGCAGCGGAAGCAGCAGCAGCAGCAGCAGCACAAGGCCCCGGCTGCCCACCCTG AGGGGCAGCTCAAGTTCCACCCAGACACAGACGATGTACCTGTCCCAGCTCCAGCCGGTGACCAGAAGGAGGTGG ACACTTCAGAAAAGAAACTTCTCGAGCGGCTCCCTGAGGTTGAGGTGCCCCAGCATCTG<u>TGA</u>TCCTCCGGGACCC GCCGGTGTCATGTTGGGCTCCTGGGGCGGGGCACGGCCTGGCATTTCACGCATTGCTGCCACCCCAGGTCCACC TGTCTCCACTTTCACAGCCTCCAAGTCTGTGGCTCTTCCCTTCTGTCCTCCGAGGGGGCTTGCCTTCTCTCGTGTC TGCTCTGAGCCTGCGTTCCTAGGTGGCTCGGCCTCAGCTGCCTGGGTTGTGGCCGCCCTAGCATCCTGTATGCCC ACAGCTACTGGAATCCCCGCTGCTGCTCCGGGCCAAGCTTCTGGTTGATTAATGAGGGCATGGGGTGGTCCCTCA AGACCTTCCCCTACCTTTTGTGGAACCAGTGATGCCTCAAAGACAGTGTCCCCTCCACAGCTGGGTGCCAGGGGC AGGGGATCCTCAGTATAGCCGGTGAACCCTGATACCAGGAGCCTGGGCCTCCCTGAACCCCTGGCTTCCAGCCAT CTCATCGCCAGCCTCCTCGGACCTCTTGGCCCCCAGCCCCTTCCCCACACAGCCCCAGAAGGGTCCCAGAGCT

MPPSGPRGTLLLLPLLLLLLRAVLAVPLERGAPNKEETPATESPDTGLYYHRYLQEVIDVLETDGHFREKLQAA NAEDIKSGKLSRELDFVSHHVRTKLDELKRQEVSRLRMLLKAKMDAEQDPNVQVDHLNLLKQFEHLDPQNQHTFE ARDLELLIQTATRDLAQYDAAHHEEFKRYEMLKEHERRRYLESLGEEQRKEAERKLEEQQRRHREHPKVNVPGSQ AQLKEVWEELDGLDPNRFNPKTFFILHDINSDGVLDEQELEALFTKELEKVYDPKNEEDDMREMEEERLRMREHV MKNVDTNQDRLVTLEEFLASTQRKEFGDTGEGWETVEMHPAYTEEELRRFEEELAAREAELNAKAQRLSQETEAL GRSQGRLEAQKRELQQAVLHMEQRKQQQQQQGHKAPAAHPEGQLKFHPDTDDVPVPAPAGDQKEVDTSEKKLLE RLPEVEVPQHL

AGATATGCCTCCTCCAGTTTCAAGGCTGCAGACCTGCAGCTGGAAATGACACAGAAGCCTCATAAGAAGCCTGGC $\tt CCCGGCGAGCCCCTGGTGTTTGGGAAGACATTTACCGACCACATGCTGATGGTGGAATGGAATGACAAGGGCTGG$ GGCCAGCCCGAATCCAGCCCTTCCAGAACCTCACGCTGCACCCAGCCTCCTCCAGCCTCCACTACTCCCTGCAG $\tt CTGTTTGAGGGCATGAAGGCGTTCAAAGGCAAAGACCAGCAGGTGCGCCTCTTCCGCCCCTGGCTCAACATGGAC$ $\tt CGGATGCTGCGCTCAGCCATGCGCCTGTGCCTGCCGAGTTTCGACAAGCTGGAGTTGCTGGAGTGCATCCGCCGG$ CTCATCGAAGTGGACAAGGACTGGGTCCCCGATGCCGCCGGCACCAGCCTCTATGTGCGGCCTGTGCTCATTGGG AACGAGCCCTCGCTGGGTGTCAGCCAGCCCAGGCGCGCTCCTGTTCGTCATTCTCTGCCCAGTGGGTGCCTAC GGCAACTACAAGTTAGGTGGGAATTATGGGCCCACCGTGTTAGTGCAACAGGAGGCACTCAAGCGGGGCTGTGAA CAGGTCCTCTGGCTGTATGGGCCCGACCACCAGCTCACCGAGGTGGGAACCATGAACATCTTTGTCTACTGGACC CTACTGGACATGGCTCAGACCTGGGGTGAGTTCCGGGTGGTGGAGCGCACGATCACCATGAAGCAGTTGCTGCGG GCCTTGGAGGAGGGCCGCGTGCGGGAAGTCTTTGGCTCGGGCACCGCTTGCCAGGTCTGCCCAGTGCACCGAATC CTGTACAAAGACAGGAACCTCCATATTCCCACCATGGAAAATGGGCCTGAGCTGATCCTCCGCTTCCAGAAGGAG $\tt CTGAAGGAGATCCAGTACGGAATCAGAGCCCACGAGTGGATGTTCCCGGTG{\color{red}{\bf TGA}} AGCTGCAGGCTGTGCTCCAGA$ TCCACCGACCCGTAGCATCTCGTCACGCCAGCACTCGCCTCCCTACCAATGACTCACCTGAAGTGCAATACGAAA ${\tt TAAAAGGCCAGCGGGCGCGTCTGGGTCTCTGGCGCCCCCATGTGGTTGCGACACTCCCAAAGCCGTAAGGGCCG}$ ACCCAGGCATCTTGGCCCCCAGCCCCTCGTCGCGGGTTCAGGTCCGCCCATTACTCCTTGTCGTGCGGTCAAGGA TGTCTTTGCTGCAATTTTGAAATAAAATGCCAAAGAACACAAAAAA

MAAAALGQIWARKLLSVPWLLCGPRRYASSSFKAADLQLEMTQKPHKKPGPGEPLVFGKTFTDHMLMVEWNDKGW
GQPRIQPFQNLTLHPASSSLHYSLQLFEGMKAFKGKDQQVRLFRPWLNMDRMLRSAMRLCLPSFDKLELLECIRR
LIEVDKDWVPDAAGTSLYVRPVLIGNEPSLGVSQPRRALLFVILCPVGAYFPGGSVTPVSLLADPAFIRAWVGGV
GNYKLGGNYGPTVLVQQEALKRGCEQVLWLYGPDHQLTEVGTMNIFVYWTHEDGVLELVTPPLNGVILPGVVRQS
LLDMAQTWGEFRVVERTITMKQLLRALEEGRVREVFGSGTACQVCPVHRILYKDRNLHIPTMENGPELILRFQKE
LKEIQYGIRAHEWMFPV

AGAGCCCACCGCGCCACAGCTTGGAGGAAGAGCCTGCGGGGAACTGGCTGCAGGACGCTCTCTTCTTGAGTGCAG GTGCTGGCTCTGCTGTGACCATGCCCGTGACCTTTGCCCTCCTGCTCCTCCTGGGCCAGGCCACTGCGGACCCAT CTCAGGCCTGTGCCCTGTCCCCAGGAAACCACCTTGGCGCCAGGGAAACCTGCAATGGCAGCCTGACTTTGGCCC TGGGTGGCCCCTTCCTCCTGACATCTGTCAGCTTGCGCTTCTGTACCCCAGGACCCCCAGCCCTCATCCTGTCTG CTGCCTGGGCCTCAGGGGGTCCCTGGAGGCTGCTGTGGCACAGGCCCGCCTGGCCTGGGGCCTTAGGGGGCCCTG AAAGGGTGACCTTCCACTCCACACCAGGTCCTAAGGCCACTGTGGCGGCCACCCTCCGTGTGGAGTTTGGGG GCCAGGCCGGGCTAGCGGCAGCTGGGCTGAGAGGCCGCTGCCAGTGTCATGGCCACGCTGCCCGCTGTGCCGCCC GTGCCCGCCCCCCCCCCCACCACCATACCACTGCCCGGGGTGCGAGAGCTGCCGCCCGTCCCATC GAGACTGGCCCTGCGGCCCCCCGGCACCCCTTGCCTACCCTGCTCCTGCAACCAGCACGCCC GACGCTGCCGGTTCAACTCTGAGCTGTTCAGACTGTCGGGCGGCCGGAGTGGGGGTGTTTGTGAGCGGTGCCGCC GCAGGGCCTGCAGAGCCTGCCAGTGCCACCCTATTGGGGCAACAGGAGGAACCTGCAACCAGACCAGTGGGCAGT GCACCTGCAAGTTAGGGGTCACAGGCCTGACCTGCAACCGCTGTGGCCCTGGCTACCAGCAGAGCCGCTCCCCCA GGATGCCTGCCAGCGAATTCCAGAGGCAACAACCACCTTGCCACTACTCCTGGTGCTTATAGCTCTGACCCTC AGTGTCAAAACTACTGCAATATGTCGGACACCAGGGTACACATGAGCCTTCGGAGGTACTGCCAGCAGGACCATG TTCTCCGCGCGCAGGTGCTAGCGTCCGAGGCGGCCGGCCATGCCAGCGGCTGCCGTGCTGCCG TTTACAAGCAGCGGGCGCAGCCCGTGCGACGCGGCGACCAGGACGCCTGGGTGCCCCGCGCCGACCTGACCTGCG GCTGCCTGCGCCTGCAGCCAGGCACCGACTACCTGCTGCTGGGCAGCGCGTGGGCGACCCCGACCCCACGCGCC TCATCCTCGACCGCCACGGCCTCGCCATGGAGGCCGCGCTGGGCCCCTGAAGCGGCTGCAGCAGG GGGCTGCCTCGAGCACCAACAAGTAATTTGGGAGCGACTAGGAGCCTGAGCCTTCTACCTCGACGGTGCACTGCA GAGAGCCAATCAGACGTCGCAGAGCCCCGACGACACTATGCTTGCGCCCACGCCGAGCAGGCGTGCGGAACTTTT AGCAAAAGGCGGCAAGCGGGACTTCTGGTCCCAACATTTCCTCCTTTGGCCTGTGGCTTATTCCCCGCCAGTGAT CTGTTTCCCCCAATAAAGTCTCAAATCTTTGGG

WO 2004/030615 PCT/US2003/028547

6037/6881 FIGURE 5571

WO 2004/030615 PCT/US2003/028547

6038/6881 FIGURE 5572

MGVDIRHNKDRKVRRKEPKSQDIŸLRLLVKLYRFLARRTNSTFNQVVLKRLFMSRTNRPPLSLSRMIRKMKLPGR ENKTAVVVGTITDDVRVQEVPKLKVCALRVTSRARSRILRAGGKILTFDQLALDSPKGCGTVLLSGPRKGREVYR HFGKAPGTPHSHTKPYVRSKGRKFERARGRRASRGYKN

GGCACGAGGGTTCGAAG<u>ATG</u>CCGGCGCGCAAGGGTCGGCGTCGCACGTGTGAAACCGGGGAACCCATGGAAGCCG AGGAGCTGGTCATGGACGAGGAGGCCTATGTGCTCTACCACCGAGCGCAGACTGGCGCCCCCTGTCTCAGCTTTG ACATAGTCCGGGATCACCTGGGAGACAACCGGACAGAGCTTCCTCTTACACTTTACTTGTGTGCTGGGACCCAGG CTGAGAGCGCCCAGAGCAACAGACTGATGATGCTTCGGATGCACAATCTGCATGGGACAAAGCCCCCACCCTCAG TGGTGCCCCACTATGGTGGCATCAACCGAGTTCGGGTGTCATGGCTGGGTGAAGAGCCTGTGGCTGGGTGTGGT CCTTCCTCCGGGATGAGCAGGCCCAAATGAAGCCCATCTTCTCCTTCGCTGGACACATGGGCGAGGGCTTTGCCC TTGACTGGTCCCCCGGGTGACCGGTCGCCTGCCGGTGACCGGTGACAAAAGAACATCCACCTCTGGACACCTA $\tt CGGACGGCGCTCCTGGCACGTGGACCAGCGGCCATTCGTGGGCCACACACGCTCTGTGGAGGACCTGCAGTGGT$ CACCGACTGAGAACACGGTGTTTGCCTCCTGCTCAGCTGACGCCTCCATCCGCATCTGGGACATCCGGGCAGCCC CCAGCAAGGCCTGCATGCTCACCACAGCCACCGCCCATGATGGGGACGTCAATGTCATCAGCTGGAGCCGCCGGG AGCCCTTCCTGCTCAGTGGCGGGATGATGGGGCCCTCAAGATCTGGGACCTTCGGCAGTTCAAGTCTGGTTCCC CAGTGGCCACCTTCAAGCAGCACGTGGCCCCCGTGACCTCCGTCGAGTGGCACCCCCAGGACAGCGGGGTCTTTG AGGCCGACCCGGACTGGCCGACCTCCCGCAGCAGCTGTTCGTGCACCAGGGCGAGACCGAGCTGAAGGAGC GGGTTCATTCAGGTCTGTTGACTGAGACTGGCCGGCCTGTGGGCTGCCGTGATGGATTCTGTTTGACGTATTGTT CTCTAGAAGGCCTGGCTCTGATCCAGTGACCCCTCTCACCAAAGAACTCGGTTTAACCAGGGCTCTGTAAGACCA CCTGTGTCCCCAGAACCCAGTTTTTTGTTTGTTTGTTTGAGACGGAGTCTTGGTCTGTCGCCCAGGCTGGAGTGC AGTAGCACGATCTTGGCTCACTGCAACCTCCGCCTCCTGGGTTAAAGTGATTCTCTCAGCTCAGTCTCCCAGGTA GCTGGGATTACAGGCATGTGCCACCACCACCCCGTTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTT GGCCAGGCTGGTCTCAAATTCTTGATCTCAAGTGATCTGTCCGCCCCGGCCTCCCAGAGTGCTGGGTTGGGATTA ${\tt CAGGCGTGAGCCACCGGGTCCGGCTCAGGACCCAGTTTTGGCTGCTGGTTCCCAGCAGGGGACTCGGGGGATATA}$ CAGTGGCTGCACCAAATTGGAGGTGTGGGTTCCTCCAACACAATTTGCTTCTGCCCGTTGTCTTCCTGCCAGCTG GGTTTGGCCAGGATTTCTCCGTGTGGGGGCTACATGCGACCCTCTCCCCTCCTCCCTGACTTTAGAGGCTGGTGC ΑΑΑΑΑΑΑΑΑΑ

MAARKGRRTCETGEPMEAESGDTSSEGPAQVYLPGRGPPLREGEELVMDEEAYVLYHRAQTGAPCLSFDIVRDH LGDNRTELPLTLYLCAGTQAESAQSNRLMMLRMHNLHGTKPPPSEGSDEEEEEEDEEDEEERKPQLELAMVPHYG GINRVRVSWLGEEPVAGVWSEKGQVEVFALRRLLQVVEEPQALAAFLRDEQAQMKPIFSFAGHMGEGFALDWSPR VTGRLLTGDCQKNIHLWTPTDGGSWHVDQRPFVGHTRSVEDLQWSPTENTVFASCSADASIRIWDIRAAPSKACM LTTATAHDGDVNVISWSRREPFLLSGGDDGALKIWDLRQFKSGSPVATFKQHVAPVTSVEWHPQDSGVFAASGAD HQITQWDLAVERDPEAGDVEADPGLADLPQQLLFVHQGETELKELHWHPQCPGLLVSTALSGFTIFRTISV

MNLFRFLGDLSHLLAIILLLKIWKSRSCAGISGKSQVLFAVVFTARYLDLFTNYISLYNTCMKVVYIACSFTTV WLIYSKFKATYDGNHDTFRVEFLVVPTAILAFLVNHDFTPLEILWTFSIYLESVAILPQLFMVSKTGEAETITSH YLFALGVYRTLYLFNWIWRYHFEGFFDLIAIVAGLVQTVLYCDFFYLYITKVLKGKKLSLPA

FIGURE 5578

AAGAAGTGGCGAAGTTACTTTTGAGGGTATTTGAGTAGCGGCGGTGTGTCAGGGGCTAAAGAGGAGGACGAAGAA AAGCAGAGCAAGGGAACCCAGGGCAACAGGAGTAGTTCACTCCGCGAGAGCCCGTCCACGAGACCCCCGCGCGCA GCCATGAGCCCCGCCCCCCGCTGTTGCTTGGAGAGGGGCGGGACCTGGAGAGAGGCTGCTCCGTGACCCCACCAT TTCACCCACTGTAAAGGAGGAGGGTCCGGAGCCGTGGCCCGGGGGTCCGGACCCTGATGTCCCAGGCACTGATGA GGCCAGCTCAGCCTGCAGCACAGACTGGGTCATCCCAGATCCCGAAGAGGAACCAGAGCGCAAGCGAAAGAAGGG CCCAGCCCGAAGATGCTGGGCCACGAGCTTTGCCGTGTCTGTGGGGACAAGGCCTCCGGCTTCCACTACAACGT GGGTGCCGGAACCTGCCAGATGGACGCTTTCATGCGGCGCAAGTGCCAGCAGTGCCGGCTGCGCAAGTGCAAGGA GGCAGGGATGAGGGAGCAGTGCGTCCTTTCTGAAGAACAGATCCGGAAGAAGAAGATTCGGAAACAGCAGCAGGA GTCACAGTCACAGTCGCAGTCACCTGTGGGGCCGCAGGGCAGCAGCAGCTCAGCCTCTGGGCCTTGCGCCTTCCCC TGGTGGATCTGAGGCAGGCAGGCCAGGGCTCCGGGGAAGGCGAGGGTGTCCAGCTAACAGCGGCTCAAGAACTAAT GATCCAGCAGTTGGTGGCGGCCCAACTGCAGTGCAACAAACGCTCCTTCTCCGACCAGCCCAAAGTCACGCCCTG GCCCTGGGCGCAGACCCCCAGTCCCGAGATGCCCGCCAGCAACGCTTTGCCCACTTCACGGAGCTGGCCATCAT CTCAGTCCAGGAGATCGTGGACTTCGCTAAGCAAGTGCCTGGTTTCCTGCAGCTGGGCCGGGAGGACCAGATCGC CCTCCTGAAGGCATCCACTATCGAGATCATGCTGCTAGAGACAGCCAGGCGCTACAACCACGAGACAGAGTGTAT CACCTTCTTGAAGGACTTCACCTACAGCAAGGACGACTTCCACCGTGCAGGCCTGCAGGTGGAGTTCATCAACCC ${\tt CATCTTCGAGTTCTCGCGGGCCATGCGGCGGGCCTGGGCCTGGACGCCTGAGTACGCCCTGCTCATCGCCATCAA}$ CATCTTCTCGGCCGACCGGCCCAACGTGCAGGAGCCGGGCCGCGTGGAGGCGTTGCAGCAGCCCTACGTGGAGGC GCTGCTGTCCTACACGCGCATCAAGAGGCCGCAGGACCAGCTGCGCTTCCCGCGCATGCTCATGAAGCTGGTGAG CCTGCGCACGCTGAGCTCTGTGCACTCGGAGCAGGTCTTCGCCTTGCGGCTCCAGGACAAGAAGCTGCCGCCTCT GCTGTCGGAGATCTGGGACGTCCACGAGTGAGGGGCTGGCCACCCAGCCCCACAGCCTTGCCTGACCACCCTCCA GCAGATAGACGCCGGCACCCCTTCCTCTTCCTAGGGTGGAAGGGGCCCTGGGCCGAGCCTGTAGACCTATCGGCT AAAGGGTTGCAGGTCCCGACCACTGACCCTTCCCGGCTGCCCTCCCCCAGCTTACACCTCAAGCCCAGCACA CAGTGCACCTTGAACAGAGGGAGGGGGGGACCCATGGCTCTCCCCCCTAGCCCGGGAGACCAGGGCCTTCCTCTT CCTCTGCTTTTATTTAATAAAAACTAAAAACAGAAA

MSSPTTSSLDTPLPGNGPPQPGAPSSSPTVKEEGPEPWPGGPDPDVPGTDEASSACSTDWVIPDPEEEPERKRKK GPAPKMLGHELCRVCGDKASGFHYNVLSCEGCKGFFRRSVVRGGARRYACRGGGTCQMDAFMRRKCQQCRLRKCK EAGMREQCVLSEEQIRKKKIRKQQQESQSQSQSPVGPQGSSSSASGPGASPGGSEAGSQGSGEGEGVQLTAAQEL MIQQLVAAQLQCNKRSFSDQPKVTPWPLGADPQSRDARQQRFAHFTELAIISVQEIVDFAKQVPGFLQLGREDQI ALLKASTIEIMLLETARRYNHETECITFLKDFTYSKDDFHRAGLQVEFINPIFEFSRAMRRLGLDDAEYALLIAI NIFSADRPNVQEPGRVEALQQPYVEALLSYTRIKRPQDQLRFPRMLMKLVSLRTLSSVHSEQVFALRLQDKKLPP LLSEIWDVHE

FIGURE 5580

GCCCAGGGCCCGGGGTGCCCCCAAAGCGGGCCCGTGGGGGCCTCTGGGATGATGATGATGCACCTTGGCCATCCC CACCACCAGGGCTGGACCCCCAGACAGAGCCCCTCATCTTCCAACAGTTGGAGATTGACCATTATGTGGGCCCAG AGGGGTTCTCTGTCTGCCACATCCACGGCTTCGCTCCCTACTTCTACACCCCAGCGCCCCCTGGTTTCGGGC $\tt CTGGGCCGGCCGTGCTGGAACTGTGCTCCCGAGAGAGCATGTTTGGGTACCACGGGCACGGCCCCTCCC$ CGTTCCTGCGCATCACCGTGGCGCTGCCGCGCCTCGTGGCCCCGGCCCGTCTCCTGGAACAGGGCATCCGTG TGGCAGGCCTGGGCACGCCCAGCTTCGCGCCCTACGAGGCCAACGTCGACTTTGAGATCCGGTTCATGGTGGACA $\tt CGGACATCGTCGGCTGCAACTGGCTGGGAGCTCCCAGCTGGGAAATACGCCCTGAGGCTGAAGGAGAAGGCTACGC$ CTGTCATCCAGATCTGCTCGCTGGGCCTGCGCTGGGGGGAGCCCGAGCCCTTCCTACGCCTGGCGCTCACCCTGC GGCCCTGTGCCCCATCCTGGGTGCCAAGGTGCAGAGCTACGAGAAGGAGGAGGACCTGCTGCAGGCCTGGTCCA CCTTCATCCGTATCATGGACCCCGACGTGATCACCGGTTACAACATCCAGAACTTCGACCTTCCGTACCTCATCT ACTCTTCATTCCAGTCCAAGCAGACGGCCGGCGGGACACCAAGGTTGTCAGCATGGTGGGCCGCGTGCAGATGG ACATGCTGCAGGTGCTGCGGGAGTACAAGCTCCGCTCCACACGCTCAATGCCGTGAGCTTCCACTTCCTGG GCGAGCAGAAGGAGGACGTGCAGCACAGCATCATCACCGACCTGCAGAATGGGAACGACCAGACCCGCCGCCGCC TGGCTGTGTACTGCCTGAAGGATGCCTACCTGCCACTGCGGCTGCTGGAGCGGCTCATGGTGCTGAACGCCG TGGAGATGGCGAGGGTCACTGGCGTGCCCTCAGCTACCTGCTCAGTCGTGGCCAGCAGGTCAAAGTCGTATCCC AGCTGTTGCGGCAGGCCATGCACGAGGGGCTGCTGATGCCCGTGGTGAAGTCAGAGGGCGGCGAGGACTACACGG GAGCCACTGTCATCGAGCCCCTCAAAGGGTACTACGACGTCCCCATCGCCACCCTGGACTTCTCCTCGCTGTACC CGTCCATCATGATGGCCCACAACCTGTGTTACACCACGCTCCTTCGGCCCGGGACTGCACAGAAACTGGGCCTGA CTGAGGATCAGTTCATCAGGACCCCCACCGGGGACGAGTTTGTGAAGACCTCAGTGCGGAAGGGGCTGCTGCCCC GCCAGGTCCTGGATGGACGGCAGCTGGCGCTGAAGGTGAGCGCCAACTCCGTATACGGCTTCACTGGCGCCCAGG TGGGCAAGTTGCCGTGCCTGGAGATCTCACAGAGCGTCACGGGGTTCGGACGTCAGATGATCGAGAAAACCAAGC AGCTGGTGGAGTCTAAGTACACAGTGGAGAATGGCTACAGCACCAGTGCCAAGGTGGTGTATGGTGACACTGACT CCGTCATGTGCCGATTCGGCGTGTCCTCGGTGGCTGAGGCGATGGCCCTGGGGGCGGAGGCCGCGGACTGGGTGT CAGGTCACTTCCCGTCGCCCATCCGGCTGGAGTTTGAGAAGGTCTACTTCCCATACCTGCTTATCAGCAAGAAGC GCTACGCGGCCTGCTCTTCTCCTCCCGGCCCGACGCCCACGACGCCATGGACTGCAAGGGCCTGGAGGCCGTGC GCAGGGACAACTGCCCCTCGTGGCCAACCTGGTCACTGCCTCACTGCGCCGCCTGCTCATCGACCGAGACCCTG AGGGCGCGGTGGCTCACGCACAGGACGTCATCTCGGACCTGCTGTGCAACCGCATCGATATCTCCCAGCTGGTCA TCACCAAGGAGCTGACCCGCGCGGCCTCCGACTATGCCGGCAAGCAGGCCCACGTGGAGCTGGCCGAGAGGATGA GGAAGCGGGACCCCGGGAGTGCGCCCAGCCTGGGCGACCGCGTCCCCTACGTGATCATCAGTGCCGCCAAGGGTG TGGCCGCCTACATGAAGTCGGAGGACCCGCTGTTCGTGCTGGAGCACAGCCTGCCCATTGACACGCAGTACTACC TGGAGCAGCAGCTGGCCAAGCCCCTCCTGCGCATCTTCGAGCCCATCCTGGGCGAGGGCCGTGCCGAGGCTGTGC TACTGCGGGGGGACCACACGCGCTGCAAGACGGTGCTCACGGGCAAGGTGGGCGGCCTCCTGGCCTTCGCCAAAC GCCGCAACTGCTGCATTGGCTGCCGCACAGTGCTCAGCCACCAGGGAGCCGTGTGTGAGTTCTGCCAGCCCCGGG AGTCTGAGCTGTATCAGAAGGAGGTATCCCATCTGAATGCCCTGGAGGAGCGCTTCTCGCGCCTCTGGACGCAGT GCCAGCGCTGCCAGGGCAGCCTGCACGAGGACGTCATCTGCACCAGCCGGGACTGCCCCATCTTCTACATGCGCA <u>CA</u>CCTTGCAAGCATCCCATGGGGCGGGGGGGGCCAGGGAGAATTAATAAAGTTCTGGACTTTTGCT

MDGKRRPGPGPGVPPKRARGGLWDDDDAPWPSQFEEDLALMEEMEAEHRLQEQEEEELQSVLEGVADGQVPPSAI
DPRWLRPTPPALDPQTEPLIFQQLEIDHYVGPAQPVPGGPPPSRGSVPVLRAFGVTDEGFSVCCHIHGFAPYFYT
PAPPGFGPEHMGDLQRELNLAISRDSRGGRELTGPAVLAVELCSRESMFGYHGHGPSPFLRITVALPRLVAPARR
LLEQGIRVAGLGTPSFAPYEANVDFEIRFMVDTDIVGCNWLELPAGKYALRLKEKATQCQLEADVLWSDVVSHPP
EGPWQRIAPLRVLSFDIECAGRKGIFPEPERDPVIQICSLGLRWGEPEPFLRLALTLRPCAPILGAKVQSYEKEE
DLLQAWSTFIRIMDPDVITGYNIQNFDLPYLISRAQTLKVQTFPFLGRVAGLCSNIRDSSFQSKQTGRRDTKVVS
MVGRVQMDMLQVLLREYKLRSHTLNAVSFHFLGEQKEDVQHSIITDLQNGNDQTRRRLAVYCLKDAYLPLRLLER
LMVLVNAVEMARVTGVPLSYLLSRGQQVKVVSQLLRQAMHEGLLMPVVKSEGGEDYTGATVIEPLKGYYDVPIAT
LDFSSLYPSIMMAHNLCYTTLLRPGTAQKLGLTEDQFIRTPTGDEFVKTSVRKGLLPQILENLLSARKRAKAELA
KETDPLRRQVLDGRQLALKVSANSVYGFTGAQVGKLPCLEISQSVTGFGRQMIEKTKQLVESKYTVENGYSTSAK
VVYGDTDSVMCRFGVSSVAEAMALGREAADWVSGHFPSPIRLEFEKVYFPYLLISKKRYAGLLFSSRPDAHDRMD
CKGLEAVRRDNCPLVANLVTASLRRLLIDRDPEGAVAHAQDVISDLLCNRIDISQLVITKELTRAASDYAGKQAH
VELAERMRKRDPGSAPSLGDRVPYVIISAAKGVAAYMKSEDPLFVLEHSLPIDTQYYLEQQLAKPLLRIFEPILG
EGRAEAVLLRGDHTRCKTVLTGKVGGLLAFAKRRNCCIGCRTVLSHQGAVCEFCQPRESELYQKEVSHLNALEER
FSRLWTQCQRCQGSLHEDVICTSRDCPIFYMRKKVRKDLEDQEQLLRRFGPPGPEAW

GCCTCCTTCCGTCTGTAACTCACCTAAAGACCCAAGACCTGCGACATCCGTAGACCGCGCCCGCTATGCACAGCT GGGACGGCTGTGAGCCAAGAGCCGCGGAGCACGCCGGGAGGAACAGGCCGCATCCTGACGCCCGTGCGCCTGCGC TGGGCCCGGCACTGCGCACCGTCCGCACCTGGGGCCTGACGTCAGCAGGATCGGGCCCCCTTTG GCCTGATCTCCAGGAGCCGCCCCCTCCAGGGACGTCATCACAAATCAGGAGCCCGCTCTTGTGTGACGTCATAAA ACCAGGTGGGATGGCAGCCTCTCCCACGGGCCGTCCCAGACGCTCCAACGCTACCTCCAGAGCGGCGAATTCGA CCAGTTTCGGGACTTCCCCATCTTTGAGAGCAACTTCGTACAGTTCTGCCCCGACATCTATCCTGCCCCGACCTC TGACCTCTGGCCCCAGGTGACTCGGTTGGGAGAAGTTGCCAACGAGGTCACCATGGGGGTGGCAGCCTCCAGTCC AGCCCTGGAGCTCCCGGACCTATTGCTTCTGGCCGGCCCTGCCAAGGAGAACGGACACCTGCAACTCTTCGGGCT GTTCCCCTTGAAGTTCGTCCAGCTCTTTGTCCACGACAAAAGCCGGTGTCAGCTCGAGGTCAAGTTGAACACCAG CCGCACCTTCTACTTGCAGCTGCGGGCCCCACTCAAGACCCGAGACCGAGAGTTCGGCCAGTGGGTGCGGCTGCT $\tt CTACCGCCTGCGCTTCCTCTGCTGCTGTGCCCCTTCACGCAGGAG{\color{blue}{TAA}}{GAGCCCCAAGGCGTGGAAGCCAG}$ ACTTGACCCCAAGACCTCTGAACTCTGGGGACTCTGAGTCTTCCAGCATCCTTCAAGGTCACCGAATGACCAGAG ATCAAAGTACCTTGCCTCAGGGCCGGGCAGATGAGATATTAAAGTTAATAAAGGTCAGTCCATTAAGAACCAA

 $\label{thm:constraint} $$ MGPPLWPDLQEPPPPGTSSQIRSPLLCDVIKPAPHHDVTVRVVPPPRFLPLLLRPLPSDGDIAMRRDRGPKPALG GAGEVEPGGMAASPTGRPRRLQRYLQSGEFDQFRDFPIFESNFVQFCPDIYPAPTSDLWPQVTRLGEVANEVTMG VAASSPALELPDLLLLAGPAKENGHLQLFGLFPLKFVQLFVHDKSRCQLEVKLNTSRTFYLQLRAPLKTRDREFG QWVRLLYRLRFLSASAVPFTQE$

GCTGATGGCGGTAGCAGCCCCAGTCGAGCCCGGGGCAGCGGCTGCCGGGCCGGGACTGGTGCGCGAGGGGCTGG GGCGGAAGGTCGAGAGGCCGAGGCCTGTGGCACGGTGGGGCTGCTGCTGGAGCACTCATTTGAGATCGATGACAG TGCCAACTTCCGGAAGCGGGGCTCACTGCTCTGGAACCAGCAGGATGGTACCTTGTCCCTGTCACAGCGGCAGCT CAGCGAGGAGGAGCGGGCCGACTCCGGGATGTGGCAGCCCTGAATGGCCTGTACCGGGTCCGGATCCCAAGGCG ACCCGGGGCCCTGGATGGCCTGGAAGCTGGTGGCTATGTCTCCTCTTTTGTCCCTGCGTGCTCCCTGGTGGAGTC GCACCTGTCGGACCAGCTGACCCTGCACGTGGATGTGGCCGGCAACGTGGTGGGCGTGTCGGTGACGCACCC CGGGGGCTGCCGGGGCCATGAGGTGGAGGACGTGGACCTGGAGCTGTTCAACACCTCGGTGCAGCTGCAGCCGCC CACCACAGCCCCAGCCCTGAGACGGCGGCCTTCATTGAGCGCCTGGAGATGGAACAGGCCCAGAAGGCCAAGAAC GGAGCGCCAGACACCGGGGGCCAGGGTGGGGGTGGGGGTGGTGGTGGGGGGTAGTGGCCGGTGAGGGCCC AGGCTGGTCAGCGTCCCGTCTTGCACACCCAGGGGCCTCCCTTTCTGCTGGAGTCCCCTGTGTCCTCAGCCATCC CAAGAAGGGTTTGCTGGTCCCTCCTTTCCCCCCGTCCCACGAGGCCACCTGGGCCAGCCCCTTGTCCTCTGCCTT CCCCATGCAGCCCCAGGGGCTTCCCCCCTGCCCATGGAGTAGAGCCCGAGATCCTGGCCACTATGCCAGTTCTGA CCTCGCATCCCCTACCCCGAGCCCATGCAGTCTGGGAACATGCCGCCTTCTCTCCAGCCTCTGTGCCTTTGTTC CAGGTGGTCTCACCCTCCTGTCCCTGGCTGGGCTAGGTGGTCCTGTCCAGGCTCCTGCAGCGCCCCCCTCACTTT GACACTGGACTAGGATGCAGCCTCCCTTCTGTGTCCCCTTGAGGGTACCCTGGGTCCCCTCATCAGGGGCAGAGG CATGAAAGAGTCGGGGCTGGATGGCCGGGGGCTTCTGGGCCCGACGCCTAGTGCAGCCCCTGGGGTCGTGGTTTG ACATTTGTCTGCCTGGTGCAAACAAGGAATCCTTGCCTTTAAGGTGACAGGCCCTCCACAGGCTTCCAGACTTGA AGGAAAAGGTTTAAGAAAGAAAACAAAACCAACAGTTAGTGGAGTCAAAAGCCCAGACACTGTAAATAGAACCCCC TCCACCACCCCCGCCGCCCAGCATCCTACCTGGACTGCGGTGCTACGAGGGCCTGCGGGGCCTTTGCTGTGTGCC ACCCTCCCTGTAAGTCTATTTAAAAACATCGACGATACATTGAAATGTGTGAACGTTTTGAAAAGCTACAGCTTC GATACGTTATTCAGAAACCCAAGGAATGGCTGTCCCCATCCTCATGTGGGCTGTGGGAGCTCAGCTGTGTTGTGT GGCAGTTTATTAAACTGTCCCCCAGATCGACACGC

!

MAAASAGATRLLLLLLIMAVAAPSRARGSGCRAGTGARGAGAEGREGEACGTVGLLLEHSFEIDDSANFRKRGSLL WNQQDGTLSLSQRQLSEEERGRLRDVAALNGLYRVRIPRRPGALDGLEAGGYVSSFVPACSLVESHLSDQLTLHV DVAGNVVGVSVVTHPGGCRGHEVEDVDLELFNTSVQLQPPTTAPGPETAAFIERLEMEQAQKAKNPQEQKSFFAK YWMYIIPVVLFLMMSGAPDTGGQGWGWGWWWG

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TACCTGAACCTGCAAGAGAACGGCATCCAGGGTGGGAGGACTTGGCTGCTCCCATCTGACCATCCTGAGAGCCAG ATTCAGGGAAGAAAAGGGACCTCTCAGGGGAGCAGTCCCTTCCTGGTGGCTGTGGGGCAAGGGCCAGCGAAGGGC AGAGTGGATGCTTCTGGGTCACTGCGTGCTGAGCGCCGAGCAGCCTCAGGCTGTCCGCCTGTGGCCACGCTGTTG TCACGGTCCTCTGTCCAGAGGCACCAAGGAGACTTGGAAAACACTGTGGGCTGGAGCCCCAGGTGCACGCTCCCC GGGACCGGCAGCCCTGCTGAGTCACTTGACTTCACCGAGCCTTGGTCTCCTGTCTCTGAAATGACGTGTGATGCT ATCAGTGATGACCGGGACCTCCTCCTCCTGTTACTATTATTGATGTTATTATTATTAATAGAAATAGCAACCGAG TGCCTGCTTTATCAATCACCAGCATTTCCCAGGGAGGTGATAAGCTGCGTTTGGGCATGGTACAAGTTTCTCAAC GCCAACGATAACGATAACAATGAGAATGACGACGTGCTGAGCACCCCTGAACACTGGGACCTCATCTCCTCCCC GAGATTCTGCAGCTGAGCAAGAACCTGGTGCGCAAGATCGAGGTGGGCGCCTTCAACGGGCTGCCCAGCCTCAAC ACGCTGGAGCTTTTTGACAACCGGCTGACCACGGTGCCCACGCAGGCCTTCGAGTACCTGTCCAAGCTGCGGGAG CTCTGGCTGCGGAACAACCCCATCGAGAGCATCCCCTCCTACGCCTTCAACCGCGTGCCCTCGCTGCGCGCCCTG GACCTGGGCGAGCTCAAGCGGCTGGAATACATCTCGGAGGCGGCCTTCGAGGGGCTGGTCAACCTGCGCTACCTC AACCTGGGCATGTGCAACCTCAAGGACATCCCCAACCTGACGGCCCTGGTGCGCCCTGGAGGAGCTGGAGCTGTCG GGCAACCGGCTGGACCTGATCCGCCCGGGCTCCTTCCAGGGTCTCACCAGCCTGCGCAAGCTGTGGCTCATGCAC GCCCAGGTAGCCACCATCGAGCGCAACGCCTTCGACGACCTCAAGTCGCTGGAGGAGCTCAACCTGTCCCACAAC TGGCATTGCAACTGCGACGTGCTCTGGCTGAGCTGGTGGCTCAAGGAGACGGTGCCCAGCAACACGACGTGCTGC GCCCGCTGTCATGCGCCCGCCCGGCCTCAAGGGGCGCTACATTGGGGAGCTGGACCAGTCGCATTTCACCTGCTAT GCGCCCGTCATCGTGGAGCCGCCCACGGACCTCAACGTCACCGAGGGCATGGCTGCCGAGCTCAAATGCCGCACG GGCACCTCCATGACCTCCGTCAACTGGCTGACGCCCAACGGCACCCTCATGACCCACGGCTCCTACCGCGTGCGC ATCTCCGTCCTGCATGACGGCACGCTTAACTTCACCAACGTCACCGTGCAGGACACGGGCCAGTACACTGGTGGT GTTGGAGGGGGCAGTGGCGGCTACACCTACTTCACCACGGTGACCGTGGAGACCCTGGAGACGCAGCCCGGAGAG GAGGCCCTGCAGCCGCGGGGGACGGAAGGAACCGCCAGGGCCCACGACAGACGGTGTCTGGGGTGGGGGCCGG CCTGGGGACGCGGCCCGGCCTCGTCTTCTACCACGGCACCCGCCCCGCGCTCCTCGCGGCCCACGGAGAAG GCGTTCACGGTGCCCATCACGGATGTGACGGAGAACGCCCTCAAGGACCTGGACGACGTCATGAAGACCACCAAA ATCATCATCGGCTGCTTCGTGGCCATCACGTTCATGGCCGCGGTGATGCTCGTGGCCTTCTACAAGCTGCGCAAG CAGCACCAGCTCCACAAGCACCACGGGCCCACGCGCACCGTGGAGATCATCAACGTGGAGGACGAGCTGCCCGCC GCCTCGGCCGTGTCCGTGGCCGCCGCGGCCGCCGTGGCCAGTGGGGGTGGTGTGGGCGGGGACAGCCACCTGGCC CTGCCCGCCCTGGAGCGAGACCACCTCAACCACCACCACTACGTGGCTGCCGCCTTCAAGGCGCACTACAGCAGC AGCGGCTCCAAGGAGAACGTGCAAGAGACGCAGATCTGA

MAAAGLEAGVGAVGSHRPCGVPRPQIQALRFGPALWLRGCGLDHRQGLKSPPASTRSMNIEDGACPRLPVPPAAA RNQASRVICTRRDLAEVPASIPVNTRYLNLQENGIQGGRTWLLPSDHPESQIQGRKGTSQGSSPFLVAVGQGPAK GSRNGFLHRPLPHPETWMEGVFVQSTRVDASGSLRAERRAASGCPPVATLLSRSSVQRHQGDLENTVGWSPRCTL PGTGSPAESLDFTEPWSPVSEMTCDAHLQGCRGSQQEPGVPQRLRELQAGAISDDRDLLLLLLLLLLLLLLLIEIAT ECLLYQSPAFPREVISCVWAWYKFLNANDNDNNENDDVLSTPEHWDLISSPSPSEVLFIILLVVIRTDTFKHLRH LEILQLSKNLVRKIEVGAFNGLPSLNTLELFDNRLTTVPTQAFEYLSKLRELWLRNNPIESIPSYAFNRVPSLRR LDLGELKRLEYISEAAFEGLVNLRYLNLGMCNLKDIPNLTALVRLEELELSGNRLDLIRPGSFQGLTSLRKLWLM HAQVATIERNAFDDLKSLEELNLSHNNLMSLPHDLFTPLHRLERVHLNHNPWHCNCDVLWLSWWLKETVPSNTTC CARCHAPAGLKGRYIGELDQSHFTCYAPVIVEPPTDLNVTEGMAAELKCRTGTSMTSVNWLTPNGTLMTHGSYRV RISVLHDGTLNFTNVTVQDTGQYTGGVGGGSGGYTYFTTVTVETLETQPGEEALQPRGTEKEPPGPTTDGVWGGG RPGDAAGPASSSTTAPAPRSSRPTEKAFTVPITDVTENALKDLDDVMKTTKIIIGCFVAITFMAAVMLVAFYKLR KQHQLHKHHGPTRTVEIINVEDELPAASAVSVAAAAAAVASGGGVGGDSHLALPALERDHLNHHHYVAAAFKAHYS SNPSGGGCGGKGPPGLNSIHEPLLFKSGSKENVQETQI

CACTCATTAAGAACAGAGGAGGCTGCCTGTTACTCCTGGTGTTGCATCCCTCCAGACACTCTGCTGTTTCCTGCC GCAGGGACACTGAGCTGGCTATCTCGGCCGTTCGGGCAAGAACTGCAACAGGCTCTCCTGGGTCCTGCAGGTGTA CAGCCGGGCCCCTGCCTTGTGCCTCAGCTCTCGAGAGCTGCTGCTGCCGGGTGACCTGATCCAACCTGATAAGGT GCCATCTTCAGCTACCACTGCAAGGCCCTGAGGGCAACAGCAGCACGGCACTGCCCACCCGGCTGCTGATGGCCT GGTGCCAGCTGGGAGTCCTCCCGGCACTTCGAGGCCACTGAGCCACCCTTCCAGCCCCAGCCCACCATGGACAGG GGTATCCAGCTTCCTCCTCAACCTCGTCCTCTGCCCCTGAGCCAGTGACGCCCAAGGACATGCCTGTTACCCAGG ${ t TCCTGTACCAGCACTAGCTGGTCAAGGGCC} { t ATGACAGTGCTGGAGGCCGTCTTGGAGATCCAGGCCATCACTGGCA}$ GCAGGCTGCTCCCATGGTGCCAGGGCCCGCCAGGCCACCAGGCTCATGCTGGGACCCAACCCAGTGCACAAGGA CTTGGCTGCTGAGCCACACCCCAGGAGAAGGTGGATAAGTGGGCTACCAAGGGCTTCCTGCAGGCTAGGGGAGG AGCCACCCCGCTTCCCTATTGTGACCAGGCCTATGGGGAGGAGCTGTCCATACGCCACCGTGAGACCTGGGCCT GGCTCTCAAGGACAGCCCCCGGCCTGGTGCTCCAGGGGTGAAGCAGGCCAGAATCCTGGGGGAGCTGCTCC TGGTTTGAGCTGCATTCAGGAAGTGCGGGACATGGTAGGGGAGGCAAAAAGCCTTGGGCACTACCCTCCTGTGG AGCTGTTCGGTGTCCGTCGAGCTAGCCACACCCTGACACCATGTTCAAGGGTACCGGAAGAGAAGGGTGTCTGCC CCCAACCTCCCTGTGGGTGTCACTGGCCAGATGTCATGAGGGAAGCAGGCCTTGTGAGTGGACACTGACCATGA CCATGGGTGCCCACCCCCCCACATGGGGCCCCAAAGCACTGCAGGCCAAGCAGGCAACCCCACACCCTTGA

 ${\tt MTVLEAVLEIQAITGSRLLSMVPGPARPPGSCWDPTQCTRTWLLSHTPRRRWISGLPRASCRLGEEPPPLPYCDQAYGEELSIRHRETWAWLSRTDTAWPGAPGVKQARILGELLLV}$

 $\tt AGCCCCAAGCTTACCACCTGCACCCGGAGAGCTGTGTGTCACC\underline{ATG} TGGGTCCCGGTTGTCTTCCTCACCCTGTC$ CGTGACGTGGATTGGTGCTGCACCCCTCATCCTGTCTCGGATTGTGGGAGGCTGGGAGTGCGAGAAGCATTCCCA ACCCTGGCAGGTGCTTGTGGCCTCTCGTGGCAGGCAGTCTGCGGCGGTGTTCTGGTGCACCCCCAGTGGGTCCT CACAGCTGCCCACTGCATCAGGAACAAAAGCGTGATCTTGCTGGGTCGGCACAGCCTGTTTCATCCTGAAGACAC AGGCCAGGTATTTCAGGTCAGCCACAGCTTCCCACACCCGCTCTACGATATGAGCCTCCTGAAGAATCGATTCCT CAGGCCAGGTGATGACTCCAGCCACGACCTCATGCTGCTCCGCCTGTCAGAGCCTGCCGAGCTCACGGATGCTGT GAAGGTCATGGACCTGCCCACCCAGGAGCCAGCACTGGGGACCACCTGCTACGCCTCAGGCTGGGGCAGCATTGA ACCAGAGGAGTTCTTGACCCCAAAGAAACTTCAGTGTGTGGACCTCCATGTTATTTCCAATGACGTGTGTGCGCA AGTTCACCCTCAGAAGGTGACCAAGTTCATGCTGTGTGCTGGACGCTGGACAGGGGGCCAAAAGCACCTGCTCGGG TGATTCTGGGGGCCCACTTGTCTGTAATGGTGTGCTTCAAGGTATCACGTCATGGGGCAGTGAACCATGTGCCCT GCCCGAAAGGCCTTCCCTGTACACCAAGGTGGTGCATTACCGGAAGTGGATCAAGGACACCATCGTGGCCAACCC ${\tt C}\underline{{\tt TGA}}{\tt GCACCCCTATCAACCCCCTATTGTAGTAAACTTGGAAACTTGGAAATGACCAGGCCAAGACTCAAGCCTCC}$ CCAGTTCTACTGACCTTTGTCCTTAGGTGTGAGGTCCAGGGTTGCTAGGAAAAGAAATCAGCAGACACAGGTGTA GACCAGAGTGTTTCTTAAATGGTGTAATTTTGTCCTCTCTGTGTCCTGGGGAATACTGGCCATGCCTGGAGACAT ATCACTCAATTTCTCTGAGGACACAGATAGGATGGGGTGTCTGTGTTATTTGTGGGGTACAGAGATGAAAGAGGG GTGGGATCCACACTGAGAGAGTGGAGAGTGACATGTGCTGGACACTGTCCATGAAGCACTGAGCAGAAGCTGGAG GCACAACGCACCAGACACTCACAGCAAGGATGGAGCTGAAAACATAACCCACTCTGTCCTGGAGGCACTGGGAAG CCTAGAGAAGGCTGTGAGCCAAGGAGGGGGTCTTCCTTTGGCATGGGATGAGGTAAGGAGAGGGACT GGACCCCCTGGAAGCTGATTCACTATGGGGGGGGGTGTATTGAAGTCCTCCAGACACCCTCAGATTTGATGATT TCCTAGTAGAACTCACAGAAATAAAGAGCTGTTATACTGTG

MWVPVVFLTLSVTWIGAAPLILSRIVGGWECEKHSQPWQVLVASRGRAVCGGVLVHPQWVLTAAHCIRNKSVILL GRHSLFHPEDTGQVFQVSHSFPHPLYDMSLLKNRFLRPGDDSSHDLMLLRLSEPAELTDAVKVMDLPTQEPALGT TCYASGWGSIEPEEFLTPKKLQCVDLHVISNDVCAQVHPQKVTKFMLCAGRWTGGKSTCSGDSGGPLVCNGVLQG ITSWGSEPCALPERPSLYTKVVHYRKWIKDTIVANP

GGCGGACAAAACCCGATTGTTCCTGGGCCCTTTCCCCATCGCGCCTGGGCCTGCTCCCCAGCCCGGGGCAGGGGC GCCTGCAGCAGGAGCGGCCATGAAGAAGCTGATGGTGGTGCTGAGTCTGATTGCTGCAGCCTGGGCAGAGGAGCA GAATAAGTTGGTGCATGGCGGACCCTGCGACAAGACATCTCACCCCTACCAAGCTGCCCTCTACACCTCGGGCCA CTTGCTCTGTGGTGGGGTCCTTATCCATCCACTGTGGGTCCTCACAGCTGCCCACTGCAAAAAACCGAATCTTCA GGTCTTCCTGGGGAAGCATAACCTTCGGCAAAGGGAGAGTTCCCAGGAGCAGAGTTCTGTTGTCCGGGCTGTGAT CCACCCTGACTATGATGCCGCCAGCCATGACCAGGACATCATGCTGTTGCGCCTGGCACGCCCAGCCAAACTCTC TGAACTCATCCAGCCCTTCCCCTGGAGAGGGACTGCTCAGCCAACACCACCAGCTGCCACATCCTGGGCTGGGG CAAGACAGCAGATGGTGATTTCCCTGACACCATCCAGTGTGCATACATCCACCTGGTGTCCCGTGAGGAGTGTGA GGGTGATTCTGGGGGTCCGCTGGTATGTGGAGACCACCTCCGAGGCCTTGTGTCATGGGGTAACATCCCCTGTGG ATCAAAGGAGAAGCCAGGAGTCTACACCAACGTCTGCAGATACACGAACTGGATCCAAAAAAACCATTCAGGCCAA ACCCCACCACTAAGAGAATACAGGAAAATCCCTTCTAGGCATCTCCTCTCCCCAACCCTTCCACACGTTTGATT CCTTTCTCACTGCAGATTTCTCACCTGTAAGATGAAGATAAGGATGATACAGTCTCCATAAGGCAGTGGCTGTT GGAAAGATTTAAGGTTTCACACCTATGACATACATGGAATAGCACCTGGGCCACCATGCACTCAATAAAGAATGA ATTTT

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6059/6881 FIGURE 5593

MAELRVLVAVKRVIDYAVKIRVKPDRTGVVTDGVKHSMNPFCEIAVEEAVRLKEKKLVKEVIAVSCGPAQCQETI RTALAMGADRGIHVEVPPAEAERLGPLQVARVLAKLAEKEKVDLVLLGKQAIDDDCNQTGQMTAGFLDWPQGTFA SQVTLEGDKLKVEREIDGGLETLRLKLPAVVTADLRLNEPRYATLPNIMKAKKKKIEVIKPGDLGVDLTSKLSVI SVEDPPQRTAGVKVETTEDLVAKLKEIGRI

GTCCCGCCACACCGCCCGTCCCGCTTAGCCCACCTGGCCCCGCCCACTACCGCATCAGCCTTGCCCCACCCTTT ATCGCTACGGACCTTAAAATACCAGCAACAGCCCCTTCGCCCCAAGACCATGTAGACAACCCCACTCAGGTCGTG TTCCTGCTTAAAACCCTTACTGACCTCTGCTTCGGCCCTGCGCCAAGTCGAGTCCTCACTCGGGAGGAGGAGGAGGCA CTGCAGACAGACAGTGGGGAGAAGGTGAAAGAGTTGGAGCCGCAGCCGACAGAGCTACGTGGTGCTGGGACTGAA AGAGAGGGAGAGGGCAGTGGGTGACAAGCAGAGTAGAGGGAACCACAGCAGGGAAGCCTAGGGAGTTG GAAGCCCAGAAGAGGAAGAAGAAGAAAGAAAAGGAGTCAGGGATGGCTCTTACACAGGGACCTTTGACATTCAGG GATGTAGCCATAGAATTCTCTCAGGAGGAGTGGAAATCCCTGGACCCTGTGCAGAAAGCTTTGTACTGGGATGTG GGGAACAGTAATACAGGAGAAAAATGCCAAACAGTGACGCTGGAAAGACATGAATGTTATGATGTTGAAAATTTT GTGCCAATGACCTATAAAAACAATCTTAATGGTAAAAGAGGTCAACATAGTCAAGAGGATGTAGAAAACAAATGT ATTGAAAATCAGCTTACATTAAGCTTTCAGTCACGTCTGACTGCACAGAAATTTCAAACTGAAGGGAAAATT TATGAGTGTAACCAATCTGAGAAGACAGTTAATAACAGTTCCCTAGTTTCACCACTTCAAAGAATTCTTCCTAGT CACATTAGGGAAAAACCTTATATGTGTAAAGGGTGTGGCAAAGCCTTTAGAGTGTCTTCAAGTCTTATTAACCAT ACTATACATCAGATAGTCCATACAAGGGGGAAGCCATATCAATGTGGTGTATGTGGCAAGATCTTCAGACAAAAT AGTCAAAGTTATAACCTTGCAATACATCAGAGAATTCACACTGGAGAGAAACCTTACAAATGTAATGAGTGTGGG AAAACCTTCAAACAAGGCTCATGCCTCACTACACATCAGATAATCCATACAGGAGAAAACCATATCAATGTGAT ATATGTGGCAAGGTCTTCAGGCAGAATTCTAATCTTGTAAATCACCAGAGAATCCACACTGGAGAGAAACCATAC **AAATGCAACATATGTGGAAAGTCCTTTAGTCAAAGTTCCAACCTGGCAACTCATCAGACAGTTCATAGTGGAAAC** AAACCTTACAAATGTGATGAGTGTGGCAAAACCTTTAAACGGAGCTCCAGCCTCACTACACATCAGATAATCCAT ACAGGAGAGAAACCATATACATGTGATGTATGCGACAAGGTCTTCAGTCAACGTTCACAACTTGCAAGGCACCAG GGGCATCGGAGAATTCATACTGGAGAGAAACCTTACAAATGTGATAAATGTGGTAAAGCCTTTAAACAGGGCTCA TTACTCACTCGACATAAGATAATTCATACCAGAGAGAAACGTTACCAATGCGGTGAATGTGGAAAGGTCTTTAGT TGTGGCACAGTCTTCAGGAACTACTCATGCCTAGCACGTCATCTAAGAATTCATACTGGGCAGAAACCTTACAAA TGTAATGTGTGGCAAGGTCTTCAATGACAGTGGAAACCTTTCAAATCATAAGAGAATTCATACTGGAGAAG CCGTTTCAATGTAACGAATGCGGCAAGGTTTTCAGTTACTCATGCCTAGCACGTCATCGGAAAATTCATACC GGAGAGAAACCTTACAAATGTAATGATTGTGGCAAAGCCTATACTCAGCGTTCAAGCCTCACTAAACATCTGATA ATTCATACTGGAGAGAAACCTTACAATTGTAATGAGTTTGGAGGGGCATTTATCCAAAGTTCAAAACTTGCAAGA TATCACAGAAATCCTACTGGGGAGAAACCACAAATGTAGCCATTGTGGTAGAACTTTTAGTCATATAACAGGC CTGACGTACCATCAGAGAAGGCATACTGGAGAGATGCCATACAAATGTATTGAATGTGGCCAGGTCTTTAATTCC TTTCGTCATCAATCAACACTAGCACGTCATCGGAGTATTCATACTGGAGAGAAACCTTACGTGTGTAATGAGTGT GGCAAAGCCTTTAGAGTGCGTTCAATTCTGGTTAATCATCAGAAAATGCATACTGGGGACAAACCTTACAAATGT AATGAATGTGGTAAAGCTTTTATTGAAAGGTCAAAGCTGGTGTACCATCAAAGAAATCACACTGGAGAGAAGCCA GAAAAACCTTATAAATGTAATGAGTGTGGCAAATCTTTCATTAGTCGCTCAGGCCTCACTAAACATCAGACAAAA CATACTGCAGAGAGTCTTAAAACAAAATTCAATGTGGAAAAGCCTTTAGATGTTCTCCTAACTTCTGGTCTTTAC CAAATTCATACTGGAGAGAAACCTTACAAATGTAATCAGTGTGGTAAAATTTAA

 $\label{thm:concor} \begin{minipage}{llll} MPYKCIECGQVFNSTSNLARHRRIHTGEKPYKCNECGKVFRHQSTLARHRSIHTGEKPYVCNECGKAFRVRSILV\\ NHQKMHTGDKPYKCNECGKAFIERSKLVYHQRNHTGEKPYKCIECGKAFGRFSCLNKHQMIHSGEKPYKCNECGK\\ SFISRSGLTKHQTKHTAESLKTKFNVEKPLDVLLTSGFK\\ \end{minipage}$

AGCACAGCGCTGGCCGCAGTCTGACAGGAAAGGGACCGAGCCAAGATGGCGGCGGCCGACGACGACTCGCTG TACCCCATCGCGGTGCTCATAGACGAACTCCGCAATGAGGACGTTCAGCTTCGCCTCAACAGCATCAAGAAGCTG TCCACCATCGCCTTGGCCCTTGGGGTTGAAAGGACCCGAAGTGAGCTTCTGCCTTTCCTTACAGATACCATCTAT GATGAAGATGAGGTCCTCCTGGCCCTGGCAGAACAGCTGGGAACCTTCACTACCCTGGTGGGAGGCCCAGAGTAC GTGCACTGCCTGCCACCGCTGGAGTCGCTGGCCACAGTGGAGGAGACAGTGGTGCGGGACAAGGCAGTGGAG TCCTTACGGGCCATCTCACACGAGCACTCGCCCTCTGACCTGGAGGCGCACTTTGTGCCGCTAGTGAAGCGGCTG GCGGGCGGCGACTGGTTCACCTCCGCACCTCGGCCTGCGGCCTCTTCTCCGTCTGCTACCCCCGAGTGTCCAGT GCTGTGAAGGCGGAACTTCGACAGTACTTCCGGAACCTGTGCTCAGATGACACCCCCATGGTGCGGCGGGCCGCA GCCTCCAAGCTGGGGGAGTTTGCCAAGGTGCTGGAGCTGGACAACGTCAAGAGTGAGATCATCCCCATGTTCTCC $\tt CCCCAGGAGGATCTGGAGGCCCTGGTGATGCCCACTCTGCGCCAGGCCGCTGAAGACAAGTCCTGGCGCGTCCGC$ GCCTTCCAGAACCTGATGAAAGACTGTGAGGCCGAGGTGAGGGCCGCAGCCTCCCACAAGGTCAAAGAGTTCTGT GAAAACCTCTCAGCTGACTGTCGGGAGAATGTGATCATGTCCCAGATCTTGCCCTGCATCAAGGAGCTGGTGTCC ACCATCGAGCACCTCTTGCCCCTCTTCCTGGCTCAGCTGAAGGATGAGTGCCCTGAGGTACGGCTGAACATCATC TCTAACCTGGACTGTGTGAACGAGGTGATTGGCATCCGGCAGCTGTCCCAGTCCCTGCCCATTGTGGAG GTGGAGTTCTTTGATGAGAAACTTAACTCCTTGTGCATGGCCTGGCTTGTGGATCATGTATATGCCATCCGCGAG GCAGCCACCAGCAACCTGAAGAAGCTAGTGGAAAAGTTTGGGAAGGAGTGGGCCCATGCCACAATCATCCCCAAG GTCTTGGCCATGTCCGGAGACCCCAACTACCTGCACCGCATGACTACGCTCTTCTGCATCAATGTGCTGTCTGAG GTCTGTGGGCAGGACATCACCACCAAGCACATGCTACCCACGGTTCTGCGCATGGCTGGGGACCCGGTTGCCAAT GTCCGCTTCAATGTGGCCAAGTCTCTGCAGAAGATAGGGCCCATCCTGGACAACAGCACCTTGCAGAGTGAAGTC AAGCCCATCCTAGAGAAGCTGACCCAGGACCAGGATGTGGACGTCAAATACTTTGCCCAGGAGGCTCTGACTGTT $\tt CTGTCTCGCCTGATGCTGGAAGAGGAGCAAACACTGGCCTCTGGTGTCCACCCTCCAACCCCCACAAGTCCCT$ CTTTGGGGAGACACTGGGGGGCCTTTGGCTGTCACTCCCTGTGCATGGTCTGACCCCAGGCCCCTTCCCCCAGCA ACAGGACAGTGACCTTGGGAGGAAGGGGCTACTCCGCC

GCAAGACCTTCAGTCAAACGTCATACCTTGTGTACCATCGTAGACTTCATACTGGAGAGAAACCTTACAAATGTG AAGAATGTGACAAAGCTTTCAGTTTCAAATCAAACCTTGAAAGACATAGGAAAATTCATACTGGAGAGAAACCTT ACAAGTGTAATGAATGCAGCAGGACCTTTAGTCGGAAGTCATCCCTTACACGCCATCGTAGACTTCATACTGGAG ATACTGGAGAGAACCTTACAAATGTGAAGAATGTGATGAAGCTTTCAGTTTCAAATCGAACCTTGAAAGACATA TATACCATCGTAGACTTCATACTGGAGAGAAACCTTACAAATGTGAAGAATGTGATGAAGCTTTCAGTTTCAAAT GTCGGAAGTCATCCCTTACACGCCATTGTAGACTTCATACTGGAGAGAAACCTTACCAGTGTAATGAGTGTGGCA AAGCCTTTCGTGGGCAGTCAGCACTTATTTACCATCAAGCAATCCATGGTATAGGGAAACTTTACAAATGTAATG ATTGTCACCAAGTCTTTAGTAATGCTACAACCATTGCAAATCATTGGAGAATCCATAATGAAGAGAGATCGTACA AGTGTAATAGATGTGGCAAATTTTTCAGACATCGTTCATACCTTGCAGTTCATTGGCGAACTCATAGTGGAGAGA AACCTTACAAATGTGAAGAATGTGATGAAGCTTTCAGTTTCAAATCAAACCTTCAAAGACATAGGAGAATTCATA CTGGAGAGAACCTTACAGGTGTAATGAATGTGGCAAGACCTTTAGTCGGAAGTCATACCTTACATGCCATCGTA GACTTCATACTGGAGAGAAACCTTACAAGTGTAATGAGTGTGGCAAGACCTTCGGTCGAAATTCAGCCCTTATAA CCCTTACATGCCATCTTAGACTTCATACTGGAGAGAAACCTTACAAATGTGAAGAATGTGACAAAGTTTTCAGTC GCAAATCAAGCCTTGAAAAAACACAGGAGAATTCATACTGGAGAGAAACCATACAAATGTAAGGTTTGTGACAAAG CTTTTGGGCGTGATTCACACCTGGCACAACATACTAGAATTCACACTGGAGAGAAACCTTACAAGTGTAATGAAT GTGGCAAGAACTTCCGTCACAATTCAGCCCTTGTAATTCATAAGGCAATTCATAGTGGAGAGAAACCTTACAAGT GTAATGAGTGTGGCAAGACCTTCCGTCACAATTCAGCCCTTGAAATTCATAAGGCAATTCATACTGGAGAAAAAC CTTACAAGTGTAGTGAATGTGGCAAGGTTTTTAATAGAAAAGCAAACCTTTCACGTCATCATAGACTTCATACTG GAGAGAAACCTTACAAGTGTAATAAATGTGGTAAGGTTTTTAATCAACAAGCACCCTTGCATGTCATCATAGAA TTCATACTGGAGAGAACCTTACAAGTGTAATGAGTGTGGCAAAACCTTCCGTCACAATTCAGTCCTTGTAATTC ${\tt TTGCACGTCATCATAGAATTCATACTGGAAAGAAACAT} \underline{{\tt TAG}} \underline{{\tt AAATATGAAGAATGTGACAAAGTTTACAGTTGTA}$ AATCAAGTCTTGAAAGACAGGAGAATTCATACTGGAGAGAAAGCTTACAAATGTAAGAGTTTGTGACAAGAATCT TGGGCGTGATTCACACCTGGCCCAACAACTAGAAGTCACACTGGAGAGAAACCTTACAAGTGTACTGAGTGTGG CAAAGCCTTTAGTGGGCAGTCAACACTTATTCACCATCAGGCAATCCATGGTATAGGGAAACTTTACTAATGTAA TGATTATCACAAAGTCTTCAGTAACACTACAACCGTTTCAAATCATTGGAGAATCCATAATGAGAGATTTTGAAA GTGTAATAAATGTGGCAAATTTTTCAGACATTGTTCATACCTTGCAGTTCATCGGTGAACTCATGCTGGAGAGAA ACCTTACAAATGTCATGATTGTGGCAAGGTCTTCAGTCTAGCTTCATCTTATGCAAAACAGGAGACTTCATACAG GAGACAAACTTCACAAGTATGATGATTGCAGCAAAGCCTTTACTTCACGTTCACACCTAATTAGACATCAGAGAA TCCATACTGGACAGAAATCTTACAAATGTCATCAGTGTGGCAAGGTCTTCAGTCTGAGATCACCCCTTAAGGAAC ATCAGAAAATTCATTTTTGAGATGATTGTTCCAAATGCAATGAGTATAGCAAACCATCAAGCATTAATTGGCATT AGAGTCAATTCAGCATTGACTTGAGTTTGAATTGACTTAACATTGAGTTCAAGCATTAATTGACATTAAAGTGTT TATGTTAAGAAGATTGGGCCAGGCGGGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGACCAATAG ATCACTTGAGGTCAGGAGTTTGAGACCAGACTGGCCAACAGACATGAGTCACTTTTCCCACCCTGTATTTTGTTT CTTTAATAAAAACTGTTACGGGTT

MSSLVYHRRLHTGEKPYKCEECDEAFSFKSNLERHRRIHTGEKPYKCNDCGKTFSQTSSLVYHRRLHTGEKPYKC EECDEAFSFKSNLERHRIIHTGEKLYKCNECGKTFSRKSSLTRHCRLHTGEKPYQCNECGKAFRGQSALIYHQAI HGIGKLYKCNDCHQVFSNATTIANHWRIHNEERSYKCNRCGKFFRHRSYLAVHWRTHSGEKPYKCEECDEAFSFK SNLQRHRRIHTGEKPYRCNECGKTFSRKSYLTCHRRLHTGEKPYKCNECGKTFGRNSALIIHKAIHTGEKPYKCN ECGKAFSQKSSLTCHLRLHTGEKPYKCEECDKVFSRKSSLEKHRRIHTGEKPYKCVCDKAFGRDSHLAQHTRIH TGEKPYKCNECGKNFRHNSALVIHKAIHSGEKPYKCNECGKTFRHNSALEIHKAIHTGEKPYKCSECGKVFNRKA NLSRHHRLHTGEKPYKCNKCGKVFNQQAHLACHHRIHTGEKPYKCNECGKTFRHNSVLVIHKTIHTGEKPYKCNE CGKVFNRKAKLARHHRIHTGKKH

 ${\tt AGAAACAGTGGTGCGCGGAGAGGAGGGCCTCGGG} \underline{\textbf{ATG}} \texttt{TCTCTGGCAGATGAGCTCTTAGCTGATCTCGAAGAGGG}$ CAGCAGAAGAGGAGGAAGCTATGGGGAGGAAGAAGAGAGCCAGCGATCGAGGATGTGCAGGAGGAGA CACAGCTGGATCTTTCCGGGGATTCAGTCAAGACCATCGCCAAGCTATGGGATAGTAAGATGTTTGCTGAGATTA TGATGAAGATTGAGGAGTATATCAGCAAGCCAAAGCTTCAGAAGTGATGGGACCAGTGGAGGCCGCCTG AATACCGCGTCATCGTGGATGCCAACAACCTGACCGTGGAGATCGAAAACGAGCTGAACATCATCCATAAGTTCA TCCGGGATAAGTACTCAAAGAGATTCCCTGAACTGGAGTCCTTGGTCCCCAATGCACTGGATTACATCCGCACGG TCAAGGAGCTGGGCAACAGCCTGGACAAGTGCAAGAACAATGAGAACCTGCAGCAGATCCTCACCAATGCCACCA TCATGGTCGTCACCGCCTCCACCACCCAGGGGCAGCAGCTGTCGGAGGAGGAGCTGGAGCGGCTGGAGG AGGCCTGCGACATGGCGCTGGAGCTGAACGCCTCCAAGCACCGCATCTACGAGTATGTGGAGTCCCGGATGTCCT CCAACCTCTCCAAGGTGCCCGCCTGCAACATCATGCTGCTCGGGGCCCAGCGCAAGACGCTGTCGGGCTTCTCGT CTACCTCAGTGCTGCCCCACACCGGCTACATCTACCACAGTGACATCGTGCAGTCCCTGCCACCGGATCTGCGGC GGAAAGCGGCCCGGCTGGTGGCCGCCAAGTGCACACTGGCAGCCCGTGTGGACAGTTTCCACGAGAGCACAGAAG GGAAGGTGGGCTACGAACTGAAGGATGAGATCGAGCGCAAATTCGACAAGTGGCAGGAGCCGCCGCCTGTGAAGC AGGTGAAGCCGCTGCCTGCGCCCCTGGATGGACAGCGGAAGAAGCGAGGCGGCCGCAGGTACCGCAAGATGAAGG AGCGGCTGGGGCTGACGGAGATCCGGAAGCAGGCCAACCGTATGAGCTTCGGAGAGATCGAGGAGGACGCCTACC AGGAGGACCTGGGATTCAGCCTGGGCCACCTGGGCAAGTCGGGCAGTGGGGCGTGTGCGGCAGACACAGGTAAACG AGGCCACCAAGGCCAGGATCTCCAAGACGCTGCAGCGGACCCTGCAGAAGCAGAGCGTCGTATATGGCGGGAAGT ACCCACAGGCGGCAGAGAAGAAGTGGCTGAGGCCAACCAGAAGTATTTCTCCAGCATGGCTGAGTTCCTCAAGG ACAGAGGTCCAGTCCTTCTGAAGGGCTAGGATCGGGTTCTGGCAGGGAGAACCTGCCCTGCCACTGGCCCATTG $\tt CTGGGACTGCCCAGGGAGGGGCCTTGGAAGAGTCCGGCCTGGCTTCCCCCAGGACCGAGATCACCGCCCAGTAT$ GGGCTAGAGCAGGTCTTCATCATGCCTTGTCTTTTTTAACTGAGAAAGGAGATTTTTTGAAAAAGAGTACAATTAA AAGGACATTGTCAAGAAAAAAAAAAAAAAAAAAAAA

MSLADELLADLEEAAEEEEGGSYGEEEEEPAIEDVQEETQLDLSGDSVKTIAKLWDSKMFAEIMMKIEEYISKQA KASEVMGPVEAAPEYRVIVDANNLTVEIENELNIIHKFIRDKYSKRFPELESLVPNALDYIRTVKELGNSLDKCK NNENLQQILTNATIMVVSVTASTTQGQQLSEEELERLEEACDMALELNASKHRIYEYVESRMSFIAPNLSIIIGA STAAKIMGVAGGLTNLSKVPACNIMLLGAQRKTLSGFSSTSVLPHTGYIYHSDIVQSLPPDLRRKAARLVAAKCT LAARVDSFHESTEGKVGYELKDEIERKFDKWQEPPPVKQVKPLPAPLDGQRKKRGGRRYRKMKERLGLTEIRKQA NRMSFGEIEEDAYQEDLGFSLGHLGKSGSGRVRQTQVNEATKARISKTLQRTLQKQSVVYGGKSTIRDRSSGTAS SVAFTPLQGLEIVNPQAAEKKVAEANQKYFSSMAEFLKVKGEKSGLMST

GTTCTCGACTATTGCCGAAGTGAGCCGAAGTTTGTGGCCCCGCTTCCGGAGAACTCAAGCTCCCGATTGTGCCCG AAGGAACCCGAAGGGAGACCCCGCCTCATTCCTCACGGCGAGCTCCAGACCCCGCCTCCTTTCCGGAGCCCGTCT $\verb|CTCGGATCCCAGTGTGGACCTGGACTCGAATCCCGTTGCCGACTCGCGCTCTCGGCTTCTGCTCCGGGGCTTCTT|\\$ $\tt CCCTGCCCGGGGGCCCTGACCGTGGCTTCTTCCCCGGCCTGATCTGCGCAGCCCGGGGGGGCCCCAGAAGGA$ GCCGCCTCCTGCCCGGCGAGCAGCTCAGACCATGTCGCCTGAAGAATGGACGTATCTAGTGGTTCTTCTTATCTC CATCCCCATCGGCTTCCTCTTTAAGAAAGCCGGTCCTGGGCTGAAGAGATGGGGAGCAGCCGCTGTGGGCCTGGG GCTCACCCTGTTCACCTGTGGCCCCCACACTTTGCATTCTCTGGTCACCATCCTCGGGACCTGGGCCCTCATTCA GGCCCAGCCCTGCTCCTGCCACGCCCTGGCTCTGGCCTGGACTTTCTCCTATCTCCTGTTCTTCCGAGCCCTCAG $\verb|CCTCCTGGGCCTGCCCACTCCCACGCCCTTCACCAATGCCGTCCAGCTGCTGACGCTGAAGCTGGTGAGCCT|\\$ CTATGTCCTGCGGAGCGCCTGGACCATGCTGCTGAGCGCCTACTGGCACGGCCTCCACCCGGGCTACTACCTGAG CTTCCTGACCATCCCGCTGTGCCTGCCTGCCGAGGCCCGCTGGAGTCAGCCCTGCGGGGCGGCTGAGCCCAGG GGGCCAGAAGGCCTGGGACTGGGTGCACTGGTTCCTGAAGATGCGCGCCTATGACTACATGTGCATGGGCTTCGT GCTGCTCTCCTTGGCCGACACCCTTCGGTACTGGGCCTCCATCTACTTCTGTATCCACTTCCTGGCCCTGGCAGC $\verb|CCCAGAGAAGCTCCGGGAGGAGTAAGCTGTCACGACGCTCCCTCTGCCAGCTGGTCCCGGGAATTCTGTGAACCA|\\$ GGCTGCTGTCTCCCCCAGAAAGAGTCCTTACCTTGGAGAGGGTCCTGGAGAGAATTTCCTCTCCCCAGCTAA ATACCCTGCCTGCAACTGAAGCAGACCCGGGGGTGTCCTCCCTGCCCTGCCCAGAGGCCACCTCCACTCCTAC AAAATCAAAGTATTGTCCAGACAAGAGTCACTGGCCCCTGCTCCAGCTTCTGGGTATCCAGAGAGCACTGCACTT GAGCTTGGGGGCAGGTCCTGGGAGTGGGAAGCCTCTTCCTTGTGTCTTTCGCTCCACTTTTAGCTCATCGCACCA ATATTGCAGACTTGGAAGGAAGCATAAGCTTCCCATTTCACAAAGGGGAAACTGAGGTGCGGGTGCGCGGGCCTG GGGACGCCGTCCCATGGCTTCCATCTGAGCCACCTCGGGACCCCAGCGCTCCTGGCGCCCTCTTCTCATCGCTT GGCCTATGACAGGTCACCGTGTGTAAATCTTTCCCAATAAAGTGTTGCACAAAG

MPVARSWVCRKTYVTPRRPFEKSRLDQELKLIGEYGLRNKREVWRVKFTLAKIRKAARELLTLDEKDPRRLFEGN ALLRRLVRIGVLDEGKMKLDYILGLKIEDFLERRLQTQVFKLGLAKSIHHARVLIRQRHIRVRKQVVNIPSFIVR LDSQKHIDFSLRSPYGGGRPGRVKRKNAKKGQGGAGAGDDEEED

LAPPCSEPEGPPLHVLGARIPVWTWTRIPLPTRALGFCSGASSLPARGPDRGFFPGLICAARRAPRRSRRRGGAL GGGGVAGAAAASGLGLLGRLLPGEQLRSWAEEMGSSRCGPGAHPVHLWPPHFAFSGHHPRDLGPHSGPA

MSDTEEQEYEEEQPEEEAAEEEEEEERPKPSRPVVPPLIPPKIPEGERVDFDDIHRKRMEKDLLELQTLIDVHF EQRKKEEEELVALKERIERRRSERAEQQRFRTEKERERQAKLAEEKMRKEEEEAKKRAEDDAKKKKVLSNMGAHF GGYLVKAEQKRGKRQTGREMKVRILSERKKPLDIDYMGEEQLREKAQELSDWIHQLESEKFDLMAKLKQQKYEIN VLYNRISHAQKFRKGAGKGRVGGRWK

6076/6881 FIGURE 5610A

CTCAAGTGATATGCCTGCCTCAGCCTCCCAAGGGGTACCTCCCCACAGTCCTGGAGCAGACTGTGGCCCCTCAGG GCCTTGAGTGGCACGCTGGTGGGGCAGCTCTTGTCTTGGAGCCGTCAGGCACCGTGTGAAAGTTTGGAGGAGGGA GGCAGGAGGTGAGGTTGGAAGTTGAGCAAGGTTCCAGGAGTCAGCCGGAGCTGGGGCAGCATACGGGGTTGCAAG TGAAGCCGCTGAGAGGCAAAAGGGATGAGTGTTAGCTGCTGTGGGATTGGGAAGCGCAGGAGCTTCAGGACCAGC TGCCCGGTGCAGAGAGAGAGGGTGGAGCCTTGCCGCCCCCTGCCCCCGGCCTCCGACCCGAGCCCCACCCGCCTG TGCTTGCCTCCCAGGTACCCCAGTGTGGCCTGCGAGATTCTGACCTCAGATGTGCCCCAGATCAATGATGCCCTG GGTGCCGATGAGTCCCTTCTGAACCGGCTCTACGGCTTCCTGCAGAGCACCGGCAGCCTCAACCCACTGCTGGCC GATGACTTCGTGGACCTGCTGCAGCACATTGGCACCTCGGCCATCATGGACCTCCTGCTGCGCCTCACC TGTGTGGAGCGGCCTCAGCTGAGGCAGGATGTTGTCAATTGGCTCAACGAGGAGAAGATCGTCCAGCGGCTGATT GAGCAGATCCACCCGTCGAAGGATGAGAATCAACATTCCAACGCATCCCAGTCCCTGTGTGACATCATCCGCCTG AGCCGGGAGCAGATGATCCAAGTCCAGGACAGCCCAGAGCCTGACCAACTGCTGGCCACCCTGGAGAAGCAGGAG ACGATTGAGCAGCTCTTAAGCAACATGTTCGAGGGGGAGCAGAGCCAGTCTGTCATCGTCAGTGGGATCCAGGTG CTGCTGACCCTGCTGGAGCCCAGGAGGCCGAGGTCCGAGTCCGTGACCGTGAACAGCTTCTTCAGCAGTGTGGAT GGGCAGCTGGAGCTCCTGGCCCAGGGGGCCCTGGAAAGCACTGTGTCCAGTGTGGGCGCCCTTGCACGCCCTACGC CCGCGGCTCAGCTGCTCCACCAGCTCCTGCTGGAGCCTCCCAAGCTGGAGCCGCTACAGATGACATGGGGCATG GCCCTGACGCACGAGCTCCTGGCACTGGACGTGCCCAACACCATGCTGGACCTCTTCTTCCATTATGTCTTCAAC AACTTCTTGCATGCCCAAGTAGAGGGATGCGTGAGCACCATGCTGAGCTTGGGGCCCACCTCCTGACAGCAGCCCT GAGACGCCCATCCAAAACCCTGTTGTGAAACATCTGCTGCAGCAGTGCCGCCTGGTGGAGCGGATCCTGACGTCC TGGGAGGAGACGACCGTGTACAGTGTGCGGGAGGCCCTCGGAAAGGCTACATGGGTCACCTGACAAGAGTGGCC GGTGCCCTGGTGCAGAACACGGAGAAGGGGCCCAATGCAGAGCAGCTGCGGCAGCTGCTGAAGGAGCTGCCCAGC GAGCAGCAGGAGCAGTGGGAAGCCTTCGTATCGGGGCCCCTGGCGGAGACCAACAAGAAGAACATGGTGGACCTG GTGAACACCCACCACCTACACTCCTCCAGTGACGATGAGGACGACCGGCTCAAGGAGTTCAACTTCCCTGAGGAG GCTGTGCTGCAGCAGGCCTTCATGGACTTCCAGATGCAGCGCATGACCTCTGCCTTCATTGACCACTTCGGCTTC AATGATGAGGAGTTTGGGGAGCAGGAGGAGGAGTGTGAACGCACCTTTTGACAAGACAGCCAACATCACCTTCTCC CTCAATGCTGACGATGAGAACCCCAACGCCAACCTACTTGAGATATGCTACAAGGACCGCATCCAGCAGTTTGAT GATGATGAGGAAGAGGAGGAGGAGGAGGGCCCAGGGCTCAGGGGAGTCTGATGGAGAAGATGGCGCCTGGCAG GATGCCCCGACCAGCCCCGAGTCTCCGGGGAGGAAGAGCTGCACACTGGGCCTCCAGCCCCACAGGGGCCCCTC AGTGTGCCCCAGGGCCTCCCCACTCAGAGCCTGGCCAGCCCTCCTGCCCGTGACGCCCTGCAGCTCAGGTCTCAG GACCCCACACCCCCTCAGCACCTCAGGAAGCCACAGAAGGCAGCAGAAGTCACGGAGCCCTCAGCCCCTTGCCAG GCCTTGGTTAGCATCGGGGACCTTCAGGCCACCTTCCACGGGATCCGTTCTGCCCCCAGCTCCTCGGACAGTGCA ACCAGAGACCCCTCTACCTCTGTCCCAGCCTCCGGGGCCCACCAGCCCCCCAGACCACAGAAGGGGAAAGAGC CCAGAGCCCTTGGGGCTTCCCCAAAGCCAGAGTGCCCAGGCCCTCACGCCTCCTCCGATACCCAATGGCTCTGCC TGGATCTCCCGGGGTGGGGGCAGGGCGGGTCCCACGATGGCCCCCATTGCCCTCATCACCCTGACACCCCCACAT ACGCTGCAGCGCAGACGGCCCACACCCGGCCTTTTAGCTCAGGTCCACCATGGGGGACGGCCCAGCGTGG GTGGGGGTGCCAGAGGGTCCCGAGTGGGGGCCGTGCCTTTGCCCAGACCCTGCACTTTCAACCAGGCCAGTCCGG

6077/6881 FIGURE 5610B

MGILINRKTDQLVSFLRKKDDFVDLLLQHIGTSAIMDLLLRLLTCVERPQLRQDVVNWLNEEKIVQRLIEQIHPS
KDENQHSNASQSLCDIIRLSREQMIQVQDSPEPDQLLATLEKQETIEQLLSNMFEGEQSQSVIVSGIQVLLTLLE
PRRPRSESVTVNSFFSSVDGQLELLAQGALESTVSSVGALHALRPRLSCFHQLLLEPPKLEPLQMTWGMLAPPLG
NTRLHVVKLLASALSANDAALTHELLALDVPNTMLDLFFHYVFNNFLHAQVEGCVSTMLSLGPPPDSSPETPIQN
PVVKHLLQQCRLVERILTSWEENDRVQCAGGPRKGYMGHLTRVAGALVQNTEKGPNAEQLRQLLKELPSEQQEQW
EAFVSGPLAETNKKNMVDLVNTHHLHSSSDDEDDRLKEFNFPEEAVLQQAFMDFQMQRMTSAFIDHFGFNDEEFG
EQEESVNAPFDKTANITFSLNADDENPNANLLEICYKDRIQQFDDDEEEEDEEEAQGSGESDGEDGAWQGSQLAR
GARLGQPPGVRSGGSTDSEDEEEEDEEEEEDEEGIGCAARGGATPLSYPSPGPQPPGPSWTATFDPVPTDAPTSP
RVSGEEELHTGPPAPQGPLSVPQGLPTQSLASPPARDALQLRSQDPTPPSAPQEATEGSKVTEPSAPCQALVSIG
DLQATFHGIRSAPSSSDSATRDPSTSVPASGAHQPPQTTEGEKSPEPLGLPQSQSAQALTPPPIPNGSAPEGPAS
SGSQ

GCGGCGCCCAGCAGAGTCAGGTGCGGACGACTTTGTCTGTAGGAGCAGCGGCGGCTTGAGGACCCGGGGAGACCC TCAAGAATCGACCCATCAGGACGCCAGAGCTGCTTCAGCGGTGACCACCTTCTCCCTCTAACACATTCTTCCCTT CTTCACAAACGGCCCATGTCAGACGAAGGCTCAAGGGGGAGCCGCCTGCCCCTGGCGCTGCCCCGGCCTCCCAG GGTTGCTCTTCAGGGGGCGGCGGCGGCGGCGGCGGCGCTCCTCGGCTGGGGGCTCGGGCAATTCCCGGCCCCCA CGCAACCTCCAAGGCTTGCTGCAGATGGCCATCACCGCGGGCTCTGAAGAGCCAGACCCTCCTCCAGAACCGATG AGTGAGGAGGGCGTCAGTGGCTGCAGGAGGCCATGTCGGCTGCCTTCCGAGGCCAGCGGGAGGAGGTGGAGCAG ATGAAGAGCTGCCTCCGAGTGCTGTCACAGCCCATGCCCCCACTGCTGGGGAGGCCGAGCAGGCGGCCGACCAG CAAGAGCGAGAGGGGCCCTGGAGCTGCTGGCCGACCTGTGTGAGAACATGGACAATGCCGCAGACTTCTGCCAG CTGTCTGGCATGCACCTGCTGGTGGGCCGGTACCTGGAGGCGGGGGCTGCGGGACTGCGGTGGCGGCGGCACAG CTCATCGGCACGTGCAGTCAGAACGTGGCAGCCATCCAGGAGCAGGTGCTGGGCCTGGGTGCCCTGCGTAAGCTG CTGCGGCTGCTGGACCGCGACGCCTGCGACACGGTGCGCGTCAAGGCCCTCTTCGCCATCTCCTGTCTGGTCCGA GAGCAGGAGGCTGGGCTGCAGTTCCTCCGCCTGGACGGCTTCTCTGTGTTGATGAGGGCCATGCAGCAGCAG GTGCAGAAGCTCAAGGTCAAATCAGCATTCCTGCTGCAGAACCTGCTGGTGGGCCACCCTGAACACAAAGGGACC CTGTGCTCCATGGGGATGGTCCAGCAGCTGGTGGCCCTGGTGCGGACAGAGCACAGCCCCTTCCACGAGCACGTG CTTGGAGCCCTGTGCAGCCTGGTGACAGACTTTCCGCAGGGTGTGCGCGAGTGTCGGGAGCCGGAACTGGGCCTG GAGGAGCTCCTCCGCCACCGCTGTCAGCTGCTGCAGCAGCATGAGGAGTACCAGGAGGAGCTGGAGTTCTGTGAA AAGCTGCTACAGACCTGTTTCTCCAGCCCAGCGGACGACAGCATGGATCGGTGAAACCAGGTGGCTTCTTGCCCC $\verb|CTTCTCCGTGGGAACCCCAGGCCTCTTGCCTCCCCACCTACAAGGCCCTCTCCCAAGGGATCGCAGGGCCT|\\$ AGGTGCCTGGACCCAGGGTGTGCCAGCCCGTCTCTGTGCAGTCCCTGGAAGGGCGCGCTGAGAAAGGCACCAGCTC $\tt CTTGGACCCCACCTCCCATGCTCTCACTCTCATCCCCGTTCTCTTGTCCACACAGCTCTTCCAATAAAGGTGTTT$ CTCTTCCTCCTTCTC

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FIGURE 5614

 ${\tt MSAHLQWMVVRNCSSFLIKRNKQTYSTEPNNLKARNSFRYNGLIHRKTVGVEPAADGKGVVVVIKRRSGQRKPATSYVRTTINKNARATLSSIRHMIRKNKYRPDLRMAAIRRASAILRSQKPVMVKRKRTRPTKSS}$

MNSNVENLPPHIIRLVYKEVTTLTADPPDGIKVFPNEEDLTDLQVTIEGPEGTPYAGGLFRMKLLLGKDFPASPP KGYFLTKIFHPNVGANGEICVNVLKRDWTAELGIRHVLLTIKCLLIHPNPESALNEEAGRLLLENYEEYAARARL LTEIHGGAGGPSGRAEAGRALASGTEASSTDPGAPGGPGGAEGPMAKKHAGERDKKLAAKKKTDKKRALRALRRL

AATTCTTTCATTTCAGAGTTGAGCAAACTGTGTCTCAAGGAGGTGTGCGCTGCAGGTAGCTGATGTGGCCAGGAT TTGAACCCACATTTTATATTCTTTGCCATTAGATTCCATTTTTCTTATCTCTATTTCTCAGCGCCAGGTCTCTT TGTTTTCTCATTGTGTCTCTGCCTAGCTCCCTCTGCCCAGGTTTCTATGTGTCTCTTTCTGTCAGAACTGTCTT CTATTTCTTCAGTCCCCTTCTCTGCATTTGTTACATCATCTCTTCATCTTAATGTATTAGGCTGGGGCTGTTT TGGGACTCCAGAGAGTTACTTTTTAACTAGCTACATCTGTCTTCAGGTGCCTGGCTTTCTGGCCTGAGGTGGAAG CAGAGGCCAGCCTCTCCCGTCATCCCCTATCTCCCCTGGGCTTACATCATGGCGGGGCTTTGAAAATCTCCCTCT GTGGCTTCTTGGAGCCGCATAGATGGGTGATCAGAGCTGGCTCTGGAACCAGGCTGCTCCAGGAGTAAGGAGCCC AGTCTTTGCATGCAGTGTTGAAAAAGGTAATGTCCCTCTTGTÇCTGAGCGAGCACCTGGCACACAGCAGGGACCC AGGCAGTGGGGCTGTTAGGTTCCTTATCTCTCCTGAGCCTTGGGCTTCCGCTATCCTTGGGACGTCTGGTCTTCT GGCTTCCCCGGTTCTTCCTGCCGCCCTGGATGCGGTGACCTGCCAGCACCTGCCGCAGCCTTCGTCCGGGAGTCG CCCCATCTCCCACGCAATCGGCCCTGTGCCCCTTGCTGCAGCCGGGCACCATCTCGACCTCGTCCTTGAGG CGCCAGATGAAGAACATCGTCCACAACTACTCAGAGGCGGAGATCAAGGTTCGAGAGGCCACGAGCAATGACCCC TGGGGCCCATCCAGCTCCTCATGTCAGAGATTGCCGACCTCACCTACAACGTTGTCGCCTTCTCGGAGATCATG AGCATGATCTGGAAGCGGCTCAATGACCATGGCAAGAACTGGCGTCACGTTTACAAGGCCATGACGCTGATGGAG TACCTCATCAAGACCGGCTCGGAGCGCTGTCGCAGCAGTGCAAGGAGAACATGTACGCCGTGCAGACGCTGAAG CTGCTGCGCGACGAGGACCGGCTGCGGGAAGAGCGGCGCCACGCGCTCAAGACCAAGGAAAAGCTGGCACAGACC GCCACGGCCTCATCAGCAGCTGTGGGCTCAGGCCCCCCTCCCGAGGCGGAGCAGCGGGCGCGCAGAGCAGCGGG GAGGAGGAGCTGCAGCTCGGCCTGGCCATGAGCAAGGAGGAGGCCGACCAGGAGGAGGAGCGGATCCGTCGC GGGGATGACCTGCGGCTGCAGATGGCAATCGAGGAGAGCAAGAGGGAGACTGGGGGGCAAGGAGGAGTCGTCCCTC ATGGACCTTGCTGACGTCTTCACGGCCCCAGCTCCTGCCCCGACCACAGACCCCTGGGGGGGCCCAGCACCACATG GCTGCTGCCGTCCCCACGGCTGCCCCACCTCGGACCCCTGGGGCGGCCCCCCTGTCCCTCCAGCTGCTGATCCC TGGGGAGGTCCAGCCCCACGCCGGCCTCTGGGGACCCCTGGAGGCCTGCTGCAGGACCCTCAGTTGAC CCTTGGGGTGGGACCCCAGCCCTGCAGCTGGGGAGGGGCCCACGCCTGATCCATGGGGAAGTTCCGATGGTGGG ${\tt GTCCCGGTCAGTGGGCCCTCAGCCTCCGATCCCTGGACACCGGCCCCGGCCTTCTCAGATCCCTGGGGAGGGTCA}$ $\verb|CCTGCCAAGCCCAGCACCAATGGCACAACAGCAGCCGGGGGATTCGACACGGAGCCCGACGAGTTCTCTGACTTT| \\$ GACCGACTCCGCACGCCACCTCCGGGAGCAGCGCAGGAGAGCTGGAGCTGCCAGGAGAGAGGTGCCG GCCCGAAGCCCTGGGGCGTTTGACATGAGTGGGGTCAGGGGATCTCTGGCTGAGGCTGTGGGCAGCCCCCCACCT GCAGCCACACCCACGCCCCCCCCCGGAAGACGCCGGAGTCATTCCTGGGGCCCAATGCAGCCCTCGTC GACCTGGACTCGCTGGTGAGCCGGCCGGGCCCCACGCCGCCTGGAGCCAAGGCCTCCAACCCCTTCCTGCCAGGC GGAGGCCCAGCCACTGGCCCTTCCGTCACCAACCCCTTCCAGCCCGCGCCTCCCGCGACGCTCACCCTGAACCAG $\tt CTCCGTCTCAGTCCTGTGCCTCCCTGGAGCGCCACCCACGTACATCTCTCCCCTTGGCGGGGCCCTGGC$ $\tt CTGCCCCCATGATGCCCCCGGGCCCCCGGCCCCCAACACTAATCCCTTCCTCCTA{\color{red}{\textbf{TAA}}} TCCAGGGCGGAAGGG$ GGCCTGGCTCCATCCGGCTGCCCATTCCGGCTCCCTGGGAGATCAGTGTTGTGAGTGCATGTGAAATGG

MSTSSLRRQMKNIVHNYSEAEIKVREATSNDPWGPSSSLMSEIADLTYNVVAFSEIMSMIWKRLNDHGKNWRHVY
KAMTLMEYLIKTGSERVSQQCKENMYAVQTLKDFQYVDRDGKDQGVNVREKAKQLVALLRDEDRLREERAHALKT
KEKLAQTATASSAAVGSGPPPEAEQAWPQSSGEEELQLQLALAMSKEEADQEERIRRGDDLRLQMAIEESKRETG
GKEESSLMDLADVFTAPAPAPTTDPWGGPAPMAAAVPTAAPTSDPWGGPPVPPAADPWGGPAPTPASGDPWRPAA
PAGPSVDPWGGTPAPAAGEGPTPDPWGSSDGGVPVSGPSASDPWTPAPAFSDPWGGSPAKPSTNGTTAAGGFDTE
PDEFSDFDRLRTALPTSGSSAGELELLAGEVPARSPGAFDMSGVRGSLAEAVGSPPPAATPTPTPPTRKTPESFL
GPNAALVDLDSLVSRPGPTPPGAKASNPFLPGGGPATGPSVTNPFQPAPPATLTLNQLRLSPVPPVPGAPPTYIS
PLGGGPGLPPMMPPGPPAPNTNPFLL

CGAGAATAAACAAGAGCGGGACAAGGAGAACCGGCATCGGAAGCGCAGCCACAGCCGCTCTCGGAGCCGGACCG CAAACGCCGGAGCCGGAGCCGCGACCGGCGAACCGGGACCAGCGGAGCGCCTCCCGGGACAGGCGACGACGCAG CAAACCTTTGACCAGAGGCGCTAAAGAGGAGCACGGTGGACTGATTCGTTCCCCCGGCCACGAGAAGAAGAAGAA GGTCCGTAAATACTGGGACGTGCCACCCCCAGGCTTTGAGCACATCACCCCAATGCAGTACAAGGCCATGCAAGC TGCGGGTCAGATTCCAGCCACTGCTCTTCTCCCCACCATGACCCCTGACGGTCTGGCTGTGACCCCAACGCCGGT GCCCGTGGTCGGAGCCAGATGACCAGACAAGCCCGGCGCCTCTACGTGGGCAACATCCCCTTTGGCATCACTGA GGCTGTGCAGATTAACCAGGACAAGAATTTTGCCTTTTTGGAGTTCCGCTCAGTGGACGAGACTACCCAGGCTAT GGCCTTTGATGGCATCATCTTCCAGGGCCAGTCACTAAAGATCCGCAGGCCTCACGACTACCAGCCGCTTCCTGG CATGTCAGAGAACCCCTCCGTCTATGTGCCTGGGGTTGTGTCCACTGTGGTCCCCGACTCTGCCCACAAGCTGTT CATCGGGGGCTTACCCAACTACCTGAACGATGACCAGGTCAAAGAGCTGCTGACATCCTTTGGGCCCCTCAAGGC CTTCAACCTGGTCAAGGACAGTGCCACGGGGCTCTCCAAGGGCTACGCCTTCTGTGAGTACGTGGACATCAACGT CACGGATCAGGCCATTGCGGGGCTGAACGGCATGCAGCTGGGGGGATAAGAAGCTGCTGGTCCAGAGGGCGAGTGT CTTGATGAGCTCCCAGGTGCAGATGGGCCGCCCACCCGACTGAGGTCCTGTGCCTCATGAACATGGTGCTGCCTGA GGAGCTGCTGGACGACGAGGAGTATGAGGAGATCGTGGAGGATGTGCGGGACGAGTGCAGCAAGTACGGGCTTGT CAAGTCCATCGAGATCCCCCGGCCTGTGGACGGCGTCGAGGTGCCCGGCTGCGGAAAGATCTTTGTGGAGTTCAC CTCTGTGTTTGACTGCCAGAAAGCCATGCAGGGCCTGACGGGCCGCAAGTTCGCCAACAGAGTGGTTGTCACAAA CTGGGGGCTTCTCCCCACTCCCGCCCCCCTTATCCCCCTCTGAAGACGATGGCAGAGGAGTGACAGCCGCA ${\tt GACACAGGAGGGGGGAGCAACTGGAATGGCAGCAATTAAGGGTGGGGAGCGGGGGTTGGGGGGGTT}$

FIGURE 5620

MSDFDEFERQLNENKQERDKENRHRKRSHSRSRSRDRKRRSRSRDRRNRDQRSASRDRRRRSKPLTRGAKEEHGG LIRSPRHEKKKKVRKYWDVPPPGFEHITPMQYKAMQAAGQIPATALLPTMTPDGLAVTPTPVPVVGSQMTRQARR LYVGNIPFGITEEAMMDFFNAQMRLGGLTQAPGNPVLAVQINQDKNFAFLEFRSVDETTQAMAFDGIIFQGQSLK IRRPHDYQPLPGMSENPSVYVPGVVSTVVPDSAHKLFIGGLPNYLNDDQVKELLTSFGPLKAFNLVKDSATGLSK GYAFCEYVDINVTDQAIAGLNGMQLGDKKLLVQRASVGAKNATLVSPPSTINQTPVTLQVPGLMSSQVQMGGHPT EVLCLMNMVLPEELLDDEEYEEIVEDVRDECSKYGLVKSIEIPRPVDGVEVPGCGKIFVEFTSVFDCQKAMQGLT GRKFANRVVVTKYCDPDSYHRRDFW

 ${\tt MLLLPPRPPHPRSSSPEAMDPPPPKAPPFPKAEGPSSTPSSAAGPRPPRLGRHLLIDANGVPYTYTVQLEEEPRGPQREAPPGEPGPRKGYSCPECARVFASPLRLQSHRVSHSDLKPFTCGACGKAFKRSSHLSRHRATHRARAGPPHTCPLCPRRFQDAAELAQHVRLH$

CCTTGTCGAAGGACCAAAGGCGACCGGTGCAGGTGCACGACGCCAGCTCCCTTCTGGGGGGCCCGGGGCCTGGGGG TTGCCATGCCCCCAGCCACCTGTCAGTGCGGGAGATGAGGGAAGATGAGAAGCCCCTGGTGCTGGAGATGCTGA AGGCCGGCGTGAAGGACACGGAAAACCGCGTGGCCCTCCATGCCTTGACACGGCCGCCGGCCCTGCTCCTCCTGG TGGCCGCCGTGAAGCTGCGCCCTGCGGCCCGATGGGGCTCGCTGCCTCCGCCGGGTGGCCTGGGGGGCCCCTGGG TGGCCGTGCGGGGCTCCGGTGACGTGTGTGGGGTCCTGGCTCTGGCCCCTGGCACAAATGCAGGGGACGGGGCCC GGGTCACCCGCCTGTCTCTCTCTCGCTGGCACCGCCGCCGGGGCGTGGGCAGGAGGCTGCTGGCCTTCGCGGAGG $\verb|CCCGGGCTCGGGCCTGGGCCTGGGGCATGGGGGAGCCCCGGGCCCGGCTCGTGGTCCCGTGGCTGTGGCCGCCT|\\$ GGGGGGTGGGAGGGATGCTGGAGGGCTGTGGCTACCAGGCCGAGGGGGGGCTGGGGCTGCCTGGGCTACACGCTGG CTGATGATCGCCTACTGTCTGCGGGTTCTTTTACCTGCTCTCCCTCAGTGAGTCCTCAACCACCCTGGGCCCAGA AACAGAGGCCTGCCGAGGGGAGGAGCCTGGCCTCTGTCCACCCGTCAGCAGTGTGAAGTCTGTTGTGTTTGAGCT TCTCAGAGTGGAATGACTCCTTTTCCTTCCTGGCCCTCGGGGGCCTCTCGAGGTCAGCCTCTCCAACCCCTACCT CAGCTCCTGTCTGCACTGAGAAACCTCCCCGGGTGATGTCTGCAAAGTCTGTGCTGTCCGTGCCCCAGGCTGGGA GAGCTATCTGGGGAGGGGGAGAGGAGGCCGAGCAGAATACACCCCAGAGTTAGGGTTTGCGACTCCGCCTCCCTG GGACCTGGATTGGGTCAGATGCCTGTCCTTGGAGGGGACAAGGTTGACTGCTTAGGAGGCGCGACGCACAGGGCT GCCAGGCCTGGCCCTCTCTGGGAAGGTTGAGAGCTGAGACGGCCAGCCCTGTCCCTTCCTCCAGATCCGTCTGG TTTTTTACACCGTTTGTTAATAAAGCCTGAAACCGC

MDLLFGRRKTPEELLRQNQRALNRAMRELDRERQKLETQEKKIIADIKKMAKQGQMDAVRIMAKDLVRTRRYVRK FVLMRANIQAVSLKIQTLKSNNSMAQAMKGVTKAMGTMNRQLKLPQIQKIMMEFERQAEIMDMKEEMMNDAIDDA MGDEEDEEESDAVVSQVLDELGLSLTDELSNLPSTGGSLSVAAGGKKAEAAASALADADADLEERLKNLRRD

CGCGGCGGCAGCCTCGGCAGCAGCGGCCTCGGCCGCCTCTGGCAGCCCGGGCCGAGGGCTCCGCTGGCGG CGAAAAGCGCTCCACCGCCCCTTCGGCCGCAGCCTCGGCCTCTGCCTCAGCCGCGGGGGTCGTCGCCCGCGGGGGG CGGCGCCGAGGCGCTGGAGCTGCTGGAGCACTGCGGCGTGTGCAGAGAGCGCCTGCGACCCGAGAGGGAGCCCCG CCTGCTGCCCTGTTTGCACTCGGCCTGTAGTGCCTGCTTAGGGCCCGGGGCCCCCGCCGCCGCCACAGCTCGGG CGTGGAGAATTATTTCATGCGTGATAGTGGCAGCAAGGCTGCCACCGACGCCCAGGATGCGAACCAGTGCTGCAC TAGCTGTGAGGATAATGCCCCAGCCACCAGCTACTGTGTGGAGTGCTCGGAGCCTCTGTGTGAGACCTGTGTAGA ACGTACTGTCTATTGCAACGTACACAAGCATGAACCCCTTGTGCTGTTTTTGTGAGAGCTGTGATACTCTCACCTG CCGAGACTGCCAGCTCAATGCCCACAAGGACCACCAGTACCAGTTCTTAGAGGATGCAGTGAGGAACCAGCGCAA GCTCCTGGCCTCACTGGTGAAGCGCCTTGGGGACAAACATGCAACATTGCAGAAGAGCACCAAGGAGGTTCGCAG CTCAATCCGCCAGGTGTCTGACGTACAGAAGCGTGTGCAAGTGGATGTCAAGATGGCCATCCTGCAGATCATGAA GGAGCTGAATAAGCGGGGCCGTGTGCTGGTCAATGATGCCCAGAAGGTGACTGAGGGGCAGCAGGAGCGCCTGGA GCGGCAGCACTGGACCATGACCAAGATCCAGAAGCACCAGGAGCACATTCTGCGCTTTTGCCTCTTGGGCTCTGGA GAGTGACAACACACAGCCCTTTTGCTTTCTAAGAAGTTGATCTACTTCCAGCTGCACCGGGCCCTCAAGATGAT TGTGGATCCCGTGGAGCCACATGGCGAGATGAAGTTTCAGTGGGACCTCAATGCCTGGACCAAGAGTGCCGAGGC CTTTGGCAAGATTGTGGCAGAGCGTCCTGGCACTAACTCAACAGGCCCTGCACCCATGGCCCCTCCAAGAGCCCC AGGGCCCTGAGCAAGCAGGGCTCTGGCAGCAGCCAGCCCATGGAGGTGCAGGAAGGCTATGGCTTTGGGTCAGG AGATGATCCCTACTCAAGTGCAGAGCCCCATGTGTCAGGTGTGAAACGGTCCCGCTCAGGTGAGGGCGAGGTGAG CGTCTTCAAGGTCTTCCCAGGCAGTACCACTGAGGACTACAACCTTATTGTTATTGAACGTGGCGCTGCCGCTGC GGAGGAGGAGACGGAGGCTGCCATTGGAGCCCCTCCTACTGCCACTGAGGCCCCTGAGACCAAACCTGTGCTTAT GGCTCTTGCGGAGGGTCCTGGTGCTGAGGGTCCCCGCCTGGCCTCACCTAGTGGCAGCACCAGCTCAGGGCTGGA GGTGGTGGCTCCTGAGGGTACCTCAGCCCCAGGTGGTGGCCCGGGAACCCTGGATGACAGTGCCACCATTTGCCG TGTCTGCCAGAAGCCAGGCGATCTGGTTATGTGCAACCAGTGTGAGTTTTGTTTCCACCTGGACTGTCACCTGCC GGCCTGCAGGATGTACCAGGGGAGGAGTGGAGCTGCTCACTCTGCCATGTGCTCCCTGACCTGAAGGAGGAGGA TGGCAGCCTCAGCCTGGATGGTGCAGACAGCACTGGCGTGGTGGCCAAGCTCTCACCAGCCAACCAGCGGAAATG TGAGCGTGTACTGCTGGCCCTATTCTGTCACGAACCCTGCCGCCCCCTGCATCAGCTGGCTACCGACTCCACCTT CTCCCTGGACCAGCCCGGTGGCACCCTGGATCTGACCCTGATCCGTGCCCGCCTCCAGGAGAAGTTGTCACCTCC CTACAGCTCCCCACAGGAGTTTGCCCAGGATGTGGGCCGCATGTTCAAGCAATTCAACAAGTTAACTGAGGACAA GGCAGACGTGCAGTCCATCATCGGCCTGCAGCGCTTCTTCGAGACGCGCATGAACGAGGCCTTCGGTGACACCAA $\tt TGGCCCTGGTGATGGCCCC\underline{TGA} GGCTGGAGCCCCATGGCCAGCCCAGCCTGGCTCTGTTCTCTGTCCTGTCACC$ CCATCCCCACTCCCTGGTGGCCTGACTCCCACTCCCTGGTGGCCCCATCCCCAGTTCCTCACGATATGGTTTT

MAASAAASAAASAAASGSPGPGEGSAGGEKRSTAPSAAASSASAAASSPAGGGAEALELLEHCGVCRERLRPE REPRLLPCLHSACSACLGPAAPAAANSSGDGGAAGDGTVVDCPVCKQQCFSKDIVENYFMRDSGSKAATDAQDAN QCCTSCEDNAPATSYCVECSEPLCETCVEAHQRVKYTKDHTVRSTGPAKSRDGERTVYCNVHKHEPLVLFCESCD TLTCRDCQLNAHKDHQYQFLEDAVRNQRKLLASLVKRLGDKHATLQKSTKEVRSSIRQVSDVQKRVQVDVKMAIL QIMKELNKRGRVLVNDAQKVTEGQQERLERQHWTMTKIQKHQEHILRFASWALESDNNTALLLSKKLIYFQLHRA LKMIVDPVEPHGEMKFQWDLNAWTKSAEAFGKIVAERPGTNSTGPAPMAPPRAPGPLSKQGSGSSQPMEVQEGYG FGSGDDPYSSAEPHVSGVKRSRSGEGEVSGLMRKVPRVSLERLDLDLTADSQPPVFKVFPGSTTEDYNLIVIERG AAAAATGQPGTAPAGTPGAPPLAGMAIVKEEETEAAIGAPPTATEGPETKPVLMALAEGPGAEGPRLASPSGSTS SGLEVVAPEGTSAPGGGFGTLDDSATICRVCQKPGDLVMCNQCEFCFHLDCHLPALQDVPGEEWSCSLCHVLPDL KEEDGSLSLDGADSTGVVAKLSPANQRKCERVLLALFCHEPCRPLHQLATDSTFSLDQFGGTLDLTLIRARLQEK LSPPYSSPQEFAQDVGRMFKQFNKLTEDKADVQSIIGLQRFFETRMNEAFGDTKFSAVLVEPPPMSLPGAGLSSQ ELSGGPGDGP

 ${\tt ATTTATTTATTGTTCCTGGTCACTGTCTCTTTGAGGATTGGTATCTCTGCTCCAGAAAAG{\color{red} \underline{ATG} \underline{GCAGCCTCTTTC} \\ }$ TTCTCTGATTTTGGTCTTATGTGGTATCTGGAGGAGCTCAAAAAGGAGGAGTTCAGGAAATTTAAAGAACATCTC AAGCAAATGACTTTGCAGCTTGAACTCAAGCAGATTCCCTGGACTGAGGTCAAAAAAAGCATCCCGGGAAGAACTT GCAAACCTCTTGATCAAGCACTATGAAGAACAACAAGCTTGGAACATAACCTTAAGAATCTTTCAAAAGATGGAT AGAAAGGATCTCTGCATGAAGGTCATGAGGGAGAGAACAGGATACACAAAGACCTATCAAGCTCACGCAAAGCAG GAATGTGACCATTTGGACCGCCTTTTTGCTCCCAAGGAAGCTGGGAAACAGCCACGTACAGTGATCATTCAAGGA CCACAAGGAATTGGAAAAACGACACTCCTGATGAAGCTGATGATGGCCTGGTCGGACAACAAGATCTTTCGGGAT AGGTTCCTGTACACGTTCTATTTCTGCTGCAGAGAACTGAGGGAGTTGCCGCCAACGAGTTTGGCTGACTTGATT TCCAGAGAGTGGCCTGACCCCGCTGCTCCTATAACAGAGATCGTGTCTCAACCGGAGAGACTCTTGTTCGTCATC GACAGCTTCGAAGAGCTGCAGGGCGGCTTGAACGAACCCGATTCGGATCTGTGTGGTGACTTGATGGAGAAACGG $\verb|CCGGTGCAGGTGCTTCTGAGCAGTTTGCTGAGGAAGAAGATGCTCCCGGAGGCCTCCCTGCTCATCAAA| \\$ ${\tt GATAGGTTAGTGTATTTCTGCTGTTTCTTCAAAGACCCGAAAAGAGCCATGGAAGCCTTCAATCTTGTAAGAGAA}$ AGTGAACAGCTGTTTTCCATATGCCAAATCCCGCTCCTCTGCTGGATCCTGTGTACCAGTCTGAAGCAAGAGATG ACACCTGAGGGTGCCGAGGGCCCGACTCCGCAAACCCAGCACCAGCTGAAGGCCCTGTGCTCCCTGGCTGCAGAG GGTATGTGGACAGACACATTTGAGTTTTGTGAAGACGACCTCCGGAGAAATGGGGTTGTTGACGCTGACATCCCT GCGCTGCTGGGCACCAAGATACTTCTGAAGTACGGGGAGCGTGAGAGCTCCTACGTGTTCCTCCACGTGTGTATC CAGGAGTTCTGTGCCGCCTTGTTCTATTTGCTCAAGAGCCACCTTGATCATCCTCACCCAGCTGTGAGATGTGTA CAGGAATTGCTAGTTGCCAATTTTGAAAAAGCAAGGAGAGCACATTGGATTTTTTTGGGGTGTTTTCTAACTGGC CTTTTAAATAAAAAGGAACAAGAAAAACTGGATGCGTTTTTTGGCTTCCAACTGTCCCAAGAGATAAAGCAGCAA ATTCACCAGTGCCTGAAGAGCTTAGGGGAGCGTGGCAATCCTCAGGGACAGGTGGATTCCTTGGCGATATTTTAC ATTGACAACGTGGACTTGGTGGTTTCTGCCTACTGCTTAAAATACTGCTCCAGCTTGAGGAAACTCTGTTTTTCC GTTCAAAATGTCTTTAAGAAAGAGGATGAACACAGCTCTACGTCGGATTACAGCCTCATCTGTTGGCATCACATC TGCTCTGTGCTCACCACCAGCGGGCACCTCAGAGAGCTCCAGGTGCAGGACAGCACCCTCAGCGAGTCGACCTTT GGCCAGAGTGTTCTGCTCTTTGAGGTGCTCTTTTATCAGCCAGACTTGAAATACCTGAGCTTCACCCTCACGAAA CTCTCTCGTGATGACATCAGGTCCCTCTGTGATGCCTTGAACTACCCAGCAGGCAACGTCAAAGAGCTAGCGCTG GTAAATTGTCACCTCTCACCCATTGATTGTGAAGTCCTTGCTGGCCTTCTAACCAACAACAAGAAGCTGACGTAT CTGAATGTATCCTGCAACCAGTTAGACACAGGCGTGCCCCTTTTGTGTGAAGCCCTGTGCAGCCCAGACACGGTC CTGGTATACCTGATGTTGGCTTTCTGCCACCTCAGCGAGCAGTGCTGCGAATACATCTCTGAAATGCTTCTGCGT AACAAGAGCGTGCGCTATCTAGACCTCAGTGCCAATGTCCTGAAGGACGAAGGACTGAAAACTCTCTGCGAGGCC CTCGCCTCTGCTCTCATCAGCAATCAAAACCTGAAGATTCTGCAAAATTGGGTGCAATGAAATCGGAGATGTGGGT GTGCAGCTGTTGTGTCGGGCTCTGACGCATACGGATTGCCGCTTAGAGATTCTTGGGTTGGAAGAATGTGGGTTA ACGAGCACCTGCTGTAAGGATCTCGCGTCTGTTCTCACCTGCAGTAAGACCCTGCAGCAGCTCAACCTGACCTTG AACACCTTGGACCACACAGGGGTGGTTGTACTCTGTGAGGCCCTGAGACACCCAGAGTGTGCCCTGCAGGTGCTC GGGCTGAGAAAACTGATTTTGATGAGGAAACCCAGGCACTTCTGACGGCTGAGGAAGAGAGAAATCCTAACCTG ACCATCACAGACGACTGTGACACAATCACAAGGGTAGAGATC<u>TGA</u>TTGCGAGGAACCTGGGCTCTGACTCGAACA CCTGCAAAGGACAGGGACTGGGACCGTTACTTACATGACACTGCACCCAGGAGATACAAATCATTGATACTCTGA GTTGTGAGATTTCTGGCACCCCATTCATAGATTTGATATGATACACGTGGTTTTTATGTGCTCTGTGGCCTTGGA TGAGTCACTGAAAGGCCTTCATGGTCTCTCGGTCTCACAAGGACCTCTTAACCCCTCAATAAAGTGTTACATTTC TAAACATTGG

MAASFFSDFGLMWYLEELKKEEFRKFKEHLKQMTLQLELKQIPWTEVKKASREELANLLIKHYEEQQAWNITLRI
FQKMDRKDLCMKVMRERTGYTKTYQAHAKQKFSRLWSSKSVTEIHLYFEEEVKQEECDHLDRLFAPKEAGKQPRT
VIIQGPQGIGKTTLLMKLMMAWSDNKIFRDRFLYTFYFCCRELRELPPTSLADLISREWPDPAAPITEIVSQPER
LLFVIDSFEELQGGLNEPDSDLCGDLMEKRPVQVLLSSLLRKKMLPEASLLIAIKPVCPKELRDQVTISEIYQPR
GFNESDRLVYFCCFFKDPKRAMEAFNLVRESEQLFSICQIPLLCWILCTSLKQEMQKGKDLALTCQSTTSVYSSF
VFNLFTPEGAEGPTPQTQHQLKALCSLAAEGMWTDTFEFCEDDLRRNGVVDADIPALLGTKILLKYGERESSYVF
LHVCIQEFCAALFYLLKSHLDHPHPAVRCVQELLVANFEKARRAHWIFLGCFLTGLLNKKEQEKLDAFFGFQLSQ
EIKQQIHQCLKSLGERGNPQGQVDSLAIFYCLFEMQDPAFVKQAVNLLQEANFHIIDNVDLVVSAYCLKYCSSLR
KLCFSVQNVFKKEDEHSSTSDYSLICWHHICSVLTTSGHLRELQVQDSTLSESTFVTWCNQLRHPSCRLQKLGIN
NVSFSGQSVLLFEVLFYQPDLKYLSFTLTKLSRDDIRSLCDALNYPAGNVKELALVNCHLSPIDCEVLAGLLTNN
KKLTYLNVSCNQLDTGVPLLCEALCSPDTVLVYLMLAFCHLSEQCCEYISEMLLRNKSVRYLDLSANVLKDEGLK
TLCEALKHPDCCLDSLCLVKCFITAAGCEDLASALISNQNLKILQIGCNEIGDVGVQLLCRALTHTDCRLEILGL
EECGLTSTCCKDLASVLTCSKTLQQLNLTLNTLDHTGVVVLCEALRHPECALQVLGLRKTDFDEETQALLTAEEE

GTGGGGCGCGGCAATGGAGCAGAGTATGGGAGAACGCGCTCGGAGTAAAGCACACGGCGCGCGAAGGCGTGGC ${\tt GGGAGTGTGCGGCGCGGACCCGGGAAGCTGGCCTGGGCGCGGGTCTCGAGTGCAGGCCTTTGTTCTGAAGTGT}$ $\tt CTCTCGGGTTGATGCGCAAGTTTCCGTCCCCATCGGCCGGACAGATTAGAATCCTTTCAGGTGCTAG{\color{red} ATC BCCGGCCGGACAGATTAGAATCCTTTCAGGTGCTAG{\color{red} ATC BCCGGCGGACAGATTAGAATCCTTTCAGGTGCTAG{\color{red} ATC BCCGGCGGACAGATTAGAATCCTTTCAGGTGCTAGATCGTAGATCGTAGATCGTAGATCGTAGATCTAG$ TGCAGAGGCTGTGCATCACATACACCTGCAGAACTTCTCACGCTCTCTGCTTGAGACCCTCAATGGGCAGAGGCT TGGGGGACACTTCTGTGACGTGACTGTGCGCATTCGTGAAGCTTCGCTGCGTGCCACCGCTGCGTGCTGCCGGC CGGCTCACCCTTCTTCCAAGACAAGCTGCTGCTCGGCCACTCTGAGATCCGTGTGCCTCCGGTGGTGCCCGCGCA GACAGTGCGACAGCTGGTAGAGTTCCTGTACAGCGGTTCGCTCGTTGTGGCGCAGGGTGAAGCCCTGCAGGTGCT GGGCACCTCTGCGCCCACGCCCTGCCCACCCCTGTGCCCCCGCCACTCGCACCTGCGCAGCTGCGTCACCGCCT GCGCCACCTGCTGGCTGCACGTCCCCCGGGGCACCCCGGTGCTGCACACAGCCGTAAGCAGCGCCAGCCCGCGCG TTTGCAGCTGCCAGCGCCCCCAACACCTGCCAAGGCTGAGGGGGCCTGATGCTGACCCCTCACTGTCCGCGGCCCC TGATGACCGAGGTGACGAGGATGACGAGGAAAGTGACGATGAGCCGATGGCGAGGATGGCGAAGGTGGCGGCCC AGGCGAGGGCCAGGCACCTCCTTCCTTCCCAGACTGTGCTGCTGCTTCCTCACTGCTGCTGCTGACAGCGCGTG CGAGGAGCCCCCTGCACCCACTGGCCTCGCTGACTACAGTGGTGCCGGGAGAGATTTTCTTCGGGGAGCTGGGTC AGCTGAGGACGTATTTCCAGACAGCTATGTATCCACTTGGCACGACGAGGATGGCGCTGTCCCCGAAGGCTGTCC CGTTGCACTCTTCCCCTTTCACTTGGGTGCCCCTGGGCCACCGCACCACCCCCTTCAGCACCATCGGGGCCAGC CCCTGCGCCCCACCCGCCTTCTACCCCACACTCCAGCCCGAGGCAGCCCCCAGTACTCAGCTGGGGGAGGTCCC GGCTCCCTCTGCTGCTCCCACCACGGCCCCCTCAGGCACCCCTGCTCGCACCCAGGTGCTGAGCCACCTACGTA TGAGTGCAGCCACTGTCGCAAGACGTTCAGCTCCCGGAAAAACTACACCAAGCACATGTTCATCCACTCGGGGGA GCGCACTCACCGGCCCGAGCGCCCCGCCCTGCCCCGCCTGCGCAAGGTCTTCTCGCACCGCGCGCTGCTGGAGCG $\texttt{CCACCTGGCGCGCACCCTGCGCCC} \underline{\textbf{TGA}} \\ \texttt{TGGCGCTGGGGCCTGGCCCACGGTGGATCCGGGGCCTCCCGC} \\$ CTCTCCCTTCACCCTTTCTCCATACCAGGGCCTAAGTCCGCCTTACTCCTCCTCCATGTACTTGAACCCTCCA GGTGGTGCCGGGCTGGGGCTGGGTTAGACCACTTCTGAGAACTGGACTATTTCCTGCGTAAACCGGGCGC TCAGGCGCTTGGACCCGGCCCAAGATTTGACTCCGGTTCTCACCCCGCCCTCTCCTGGGGTGGTGGGGGGGCTG GGGGGCCGCTTGCCTGCCCCAGGGTCAGGCTGGGCAAGGTCCCTAGCTCTCTACCCAAGCTGTTACTCCCTCATG GGGCGCCTAAGGAGACTCAAGTGGACCCATCATATATGGGGGCTTGGGCCTCGGGACTCTCGCTCTAATAAAGGAC

MAAAEAVHHIHLQNFSRSLLETLNGQRLGGHFCDVTVRIREASLRAHRCVLAAGSPFFQDKLLLGHSEIRVPPVV
PAQTVRQLVEFLYSGSLVVAQGEALQVLTAASVLRIQTVIDECTQIIARARAPGTSAPTPLPTPVPPPLAPAQLR
HRLRHLLAARPPGHPGAAHSRKQRQPARLQLPAPPTPAKAEGPDADPSLSAAPDDRGDEDDEESDDETDGEDGEG
GGPGEGQAPPSFPDCAAGFLTAAADSACEEPPAPTGLADYSGAGRDFLRGAGSAEDVFPDSYVSTWHDEDGAVPE
GCPTETPVQPDCILSGSRPPGVKTPGPPVALFPFHLGAPGPPAPPPSAPSGPAPAPPPAFYPTLQPEAAPSTQLG
EVPAPSAAPTTAPSGTPARTPGAEPPTYECSHCRKTFSSRKNYTKHMFIHSGEKPHQCAVCWRSFSLRDYLLKHM
VTHTGVRAFQCAVCAKRFTQKSSLNVHMRTHRPERAPCPACGKVFSHRALLERHLAAHPAP

 $\label{thm:mtewetaapavaetpdiklfgkwstddvqindislqdyiavkekyakylphsagryaakrfrkaqcpiverltns \\ \texttt{MMMHGRNNGKKLMTVRIVKHAFEIIHLLTGENPLQVLVNAIINSGPREDSTRIGRAGTVRRQAVDVSPLRRVNQAIWLLCTGAREAAFRNIKTIAECLADELINAAKGSSNSYAIKKKDELERVAKSNR}$

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FIGURE 5635

GACTCAGGTGAACTAACCTGCGAGAAGCTGGTTGTGCGCTGAGGCGACCAGCGCCGGAAGGCACGGTGGCGACTC ACGCTGTTCTCGCCGCTCAGAGGCGGGTCTGAGGCTCGGTGGCCGCGCCCCAGGGTGGCCCGGGCCCTTTCCTCGG ${\tt TCATTGTCTCCCCTCCAGCTCTACTCACAGGCTCCG} \underline{{\tt ATG}} {\tt GCGGCGGCCGCCCTGAGGGACCCCGCTCAGGTTCCT}$ GTGGCTGCAGACTTGCTTACAGACCATGAGGAGGGCTATGTGACCTTTGAGGATGTGGCTGTCTACTTCTCCCAG GAGGAATGGAGATTGCTTGATGACGCTCAGAGGCTCCTCTACCGCAATGTGATGCTGGAGAACTTTACACTTCTG GCCTCTCTCGGACTTGCATCTTCCAAGACCCATGAAATAACCCAGCTGGAGTCATGGGAGGAGCCCTTCATGCCT GCTTGGGAAGTTGTGACTTCAGCCATACCGAGAGGTTGTTGGCATGGAGCCGAGGCTGAGGAGGCTCCTGAGCAG ATTGCTTCTGTAGGACTGCTCAGTTCAAACATTCAGCAACACCAGAAGCAGCACTGTGGAGAGAAACCCTTAAAA AGACAACAGGGCAGGGTCCCAGTTTTGAGGAGTTGCAAAGTTCACCTATCAGAGAAGTCCTTGCAAAGCAGGGAG GTTGGGAAGGCCCTCCTGATCAGCTCAGGTGTTCTCAAGCACCAGGTGACTCACACAGGAGAAGTCACATAGG AGCTCCAAAAGTAGGGAGGCCTTTCATGCTGGAAAAAGGCATTACAAATGCAGTGAATGTGGGAAAGCCTTTGGT CAGANATATTTACTTGTTCAGCACCAGAGACTACATGCTGGGAAAAAGACGTATGAATGCAGTGAATGTGGGAAG TTATTTAGAGATATGTCCAACCTTTTTATACACCAAATAGTTCACACTGGAGAAAGGCCTTACGGGTGTAGTAAC TGTGGAAAATCCTTTAGCCGTAATGCTCACCTCATTGAACACCAGAGAGTTCACACTGGAGAAAAGCCTTTTACA TGCAGTGAATGTGGAAAAGCTTTCAGGCATAATTCCACACTTGTTCAGCATCACAAAATCCACACTGGAGTAAGG CCTTATGAGTGCAGTGAATGTGGAAAATTGTTTAGTTTCAACTCCAGCCTCATGAAACATCAGAGAGTTCACACT GGAGAAAGACCTTATAAGTGCAGTGAATGTGGAAAATTCTATAGCCACAAGTCCAACCTTATCAAACATTGGCGT GTTCATACTGGAGAAAGGCCTTACAAGTGCAGCGACTGTGGGAAATTTTTTACCCAATGCTCAAGCCTCATGCAA CTAGTTAGACATCAGAGGGTTCACACTGGAGCAAAGCCTTATGAGTGCAGGGAATGTGGGAAATTTTTTAGCCAA TTTAGAGAGAATTCCAGCCTTGTTAAACATCAGAGGGTTCACACTGGAGCAAAGCCTTATGAGTGCAGGGAATGT $\tt GGGAAGTTTTTCGCCACAACTCCAGTCTTTTAAACATCGAAGGATTCACACTGGAGAAATGCAG{\color{red}{\textbf{TGA}}} TGTGT$ GAAATCCTTTAGCCAGCGTTTCAACCTCATTCAACACCAGAAAGTTCACAGTGGAAAAAATCTTGAAGGTAACAG ATGGAAATCCGTTAGCCACACCTCCAGTCTCATTCAACACTGGACAGTTTACAATGTGGACAATGTAGTGAATAT GGAAAAAGGTTTCAGCCAAAGGCCTAACCCTATTCAACACCAGAAAGTTTAGAATGGAGAAAGGCCTTAGGGTGA CAGGTTATGTACTGTCTCTGAATCAATATGACCTCACTTAAAACAGAAACTCTGAGGATGGCCTTTATGAGGGAG GAGAAGACAGCCCTCTGCCTTGGAGCTCCAGAGAGAGGGAGCCCTGTATTCTTGGCTGTACCCGTCGAATGGAGT $\tt TTTGATCTCGCTGAGTTTGGAGTTGGGGGAGGAAAGGAGTGGTCTTGGTTCAAATGTGACTCACTTTTGCTGTTC$ AA

MAAAALRDPAQVPVAADLLTDHEEGYVTFEDVAVYFSQEEWRLLDDAQRLLYRNVMLENFTLLASLGLASSKTHE ITQLESWEEPFMPAWEVVTSAIPRGCWHGAEAEEAPEQIASVGLLSSNIQQHQKQHCGEKPLKRQQGRVPVLRSC KVHLSEKSLQSREVGKALLISSGVLKHQVTHTGEKSHRSSKSREAFHAGKRHYKCSECGKAFGQKYLLVQHQRLH AGKKTYECSECGKLFRDMSNLFIHQIVHTGERPYGCSNCGKSFSRNAHLIEHQRVHTGEKPFTCSECGKAFRHNS TLVQHHKIHTGVRPYECSECGKLFSFNSSLMKHQRVHTGERPYKCSECGKFYSHKSNLIKHWRVHTGERPYKCSD CGKFFTQCSSLMQHQKVHTGEKPFKCNECGRFFRENSTLVRHQRVHTGAKPYECRECGKFFSQSSTLMQHRKVHIGEKPFKCNECGRFFRENSSLVKHQRVHTGAKPYECRECGKFFRHNSSLFKHRRIHTGEMQ

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6105/6881 FIGURE 5638

GTGCGATCCCGGGCCCGAGGGCATCAGACGGCGGCTGATTAGCTCCGGTTTGCATCACCCGGACCGGGGGATTAG CTCCGGTTTGCATCACCCGGACCGGGGCCGGGCGCGCACGAGACTCGCAGCGGAAGTGGAGGCGGCTCCGCGCG CGTCCGCTGCTAGGACCCGGCCAGGGCTGGAGCTGGGCTGGGATCCCGAGCTCGGCAGCAGCGCAGCGGGCCGGC CCACCTGCTGGTGCCCTGGAGGCTCTGAGCCCCGGCGCGCCCCGGGCCCCACGCGGAACGACGGGGCGAGATGCGA GCCACCCTCTAGCTGCTCCTGCGGGTTCCCTGTCCAGGAAGAGCGGTTGGAGTTGGATGACAACTTAGATACC CCTACTGCTCCAGATCGTGCAACTGCTGTGGCCACTGCCTCCCGTCTTGGGCCCTATGTCCTCCTGGAGCCCGAG GAGGGCGGGCGGCCTACCAGGCCCTGCACTGCCCTACAGGCACTGAGTATACCTGCAAGGTGTACCCCGTCCAG GAAGCCCCGGCCGTGCTGGAGCCCTATGCGCGGCTGCCCCCGCACAAGCATGTGGCTCGGCCCACTGAGGTCCTG ${\tt GCTGGTACCCAGCTCTTACGCCTTTTTCACTCGGACCCATGGGGACATGCACAGCCTGGTGCGAAGCCGCCAC}$ CGTATCCCTGAGCCTGAGGCTGCCGTGCTCTTCCGCCAGATGGCCACCGCCCTGGCGCACTGTCACCAGCACGGT CTGGTCCTGCGTGATCTCAAGCTGTGTCGCTTTGTCTTCGCTGACCGTGAGAGAAGAAGCTGGTGCTGGAGAAC CTGGAGGACTCCTGCGTGCTGACTGGGCCAGATGATTCCCTGTGGGACAAGCACGCGTGCCCAGCCTACGTGGGA $\tt CCTGAGATACTCAGCTCACGGGCCTCATACTCGGGCAAGGCAGCCGATGTCTGGAGCCTGGGCGTGGCGTCTTC$ ACCATGCTGGCCGGCCACTACCCCTTCCAGGACTCGGAGCCTGTCCTGCTCTTCGGCAAGATCCGCCGCGGGGCC CGGCTCACAGCCACAGGCATCCTCCTGCACCCTGGCTGCGACAGGACCCGATGCCCTTAGCCCCAACCCGATCC ${\tt CATCTCTGGGAGGCTGCCCAGGTGGTCCCTGATGGTCTGGGGCTGGACGAAGCCAGGGAAGAGAGGGAGAGACAGA}$ GAAGTGGTTCTGTATGGCTAGGACCACCCTACTACACGCTCAGCTGCCAACAGTGGATTGAGTTTGGGGGTAGCT ${\tt CCAAGCCTTCTCCTGCCTCTGAACTGAGCCAAACCTTCAGTGCCTTCCAGAAGGGAAAAGGCAGAAGCCTGTGT}$ GGAGTGTGTGTACACATCTGCTTTGTTCCACACATGCAGTTCCTGCTTGGGTGCTTATCAGGTGCCAAGC CCTGTTCTCGGTGCTGGGAGTACAGCAGTGAGCAAAGGAGACAATATTCCCTGCTCACAGAGATGACAAACTGGC ATCCTTGAGCTGACAACACTTTTCCATGACCATAGGTCACTGTCTACACTGGGTACACTTTGTACCAGTGTCGGC CTTGTACCTTTTCAGAGAAAGGGAGGTATCCCTGTGCCAAAGGCTCCAGGCCTCTCCCCTGCAACTCAGGACCCA AGCCCAGCTCACTCTGGGAACTGTGTTCCCAGCATCTCTGTCCTCTTGATTAAGAGATTCTCCTTCCAGGCCTAA GCCTGGGATTTGGGCCAGAGATAAGAATCCAAACTATGAGGCTAGTTCTTGTCTAACTCAAGACTGTTCTGGAAT GAGGGTCCAGGCCTGTCAACCATGGGGCTTCTGACCTGAGCACCAAGGTTGAGGGACAGGATTAGGCAGGGTCTG TCCTGTGGCCACCTGGAAAGTCCCAGGTGGGACTCTTCTGGGGACACTTGGGGTCCACAATCCCAGGTCCATACT AAAAAA

 $\label{thm:product} $$\operatorname{MRATPLAAPAGSLSRKKRLELDDNLDTERPVQKRARSGPQPRLPPCLLPLSPPTAPDRATAVATASRLGPYVLLE}$$$\operatorname{PEEGGRAYQALHCPTGTEYTCKVYPVQEAPAVLEPYARLPPHKHVARPTEVLAGTQLLYAFFTRTHGDMHSLVRS}$$$\operatorname{RHRIPEPEAAVLFRQMATALAHCHQHGLVLRDLKLCRFVFADRERKKLVLENLEDSCVLTGPDDSLWDKHACPAY}$$$\operatorname{VGPEILSSRASYSGKAADVWSLGVALFTMLAGHYPFQDSEPVLLFGKIRRGAYALPAGLSAPARCLVRCLLRREP}$$\operatorname{AERLTATGILLHPWLRQDPMPLAPTRSHLWEAAQVVPDGLGLDEAREEEGDREVVLYG}$

GGGAGTCCGGGGACCCGCGATCAGCCCCGGAGGACGGGGTGGGGTCGCCCCAAACAGGAGCGCCGGGACCGCTGG GACCCCGCACTCGGCGTCCGCCGCCGCGGTAGCCGGGCAGTGGAGGTCCCGGATGAGGCGACAATTTTTCCGG CCCCCCTCCCAGTCCCGCCCCACTTCCGGGGCCGCCACTTTCACTTTCTCTTCCGCCGAAGCCGCTCCCCTTGC GAAGAACTGGGGCCTCCCGGGAGGAGAGGGCTTTGCCTTGAAACCCGGGACGCCAGGGGCGCTCCCGCAAGTG TGGTCCCGTTTCCTCCTGCGCCCAGTGCGGACCTGTCTCGGCGCCCGCTGCCCTCTCACCGCCCCACGCAGGATC CGCCGGAGGCCACACGGCTGGCTGAGTTGCTCCTGGTCTCCCGCCTCTCCCAGGCGACCCGGAGGTAGCATTTC CCAGGAGGCACGGTCCCCCCAGGGGGATGGCCACACCCCAGATGGACGAGAAGACCAAGAAGCAGAGGA AGAGCAACGGGTGCCCCTGAGTGTGCAACTGAAGCCTGAGGTCTCCCCAACGCAGGACATCAGGCTGTGGGTGAG CGTGGAGGATGCTCAGATGCACACCGTCACCATCTGGCTCACAGTGCGCCCTGATATGACAGTGGCGTCTCTCAA GGACATGGTTTTTCTGGACTATGGCTTCCCACCAGTCTTGCAGCAGTGGGTGATTGGGCAGCGGCTGGCACGAGA CCAGGAGACCCTGCACTCCCATGGGGTGCGGCAGAATGGGGACAGTGCCTACCTCTATCTGCTGTCAGCCCGCAA CACCTCCCTCAACCCTCAGGAGCTGCAGCGGGAGCGGCAGCTGCGGATGCTGGAAGATCTGGGCTTCAAGGACCT CACGCTGCAGCCGCGGGCCCTCTGGAGCCAGGCCCCCCAAAGCCCGGGGTCCCCCAGGAACCCGGACGGGGCCA GCCAGATGCAGTGCCTGAGCCCCCACCGGTGGGCTGGCAGTGCCCCGGGTGCACCTTCATCAACAAGCCCACGCG GCCTGGCTGTGAGATGTGCTGCCGGGCGCCCCGAGGCCTACCAGGTCCCCGCCTCATACCAGCCCGACGAGGA GGAGCGAGCCGCCTGGCGGCGAGGAGGAGGCGCTGCGTCAGTACCAGCAGCAGCAGCAGCAGCAGCAGGAGGG GAACTACCTGCAGCACGTCCAGCTGGACCAGAGGAGCCTGGTGCTGAACACGGAGCCCGCCGAGTGCCCCGTGTG CTACTCGGTGCTGGCGCCCGGCGAGGCCGTGGTGCTGCGTGAGTGTCTGCACACCTTCTGCAGGGAGTGCCTGCA GGGCACCATCCGCAACAGCCAGGAGGCGGAGGTCTCCTGCCCCTTCATTGACAACACCTACTCGTGCTCGGGCAA GCTGCTGGAGAGGGAGATCAAGGCGCTCCTGACCCCTGAGGATTACCAGCGATTTCTAGACCTGGGCATCTCCAT TGCTGAAAACCGCAGTGCCTTCAGCTACCATTGCAAGACCCCAGATTGCAAGGGATGGTGCTTCTTTGAGGATGA CTGCAAGGAGTATCAGGAGGACCTGGCCCTGCGGGCTCAGAACGATGTGGCTGCCCGGCAGACGACAGAGATGCT GAAGGTGATGCTGCAGCAGGGCGAGGCCATGCGCTGCCCCCAGTGCCAGATCGTGGTACAGAAGAAGGACGGCTG CGACTGGATCCGCTGCACCGTCTGCCACACCGAGATCTGCTGGGTCACCAAGGGCCCACGCTGGGGCCCTGGGGG CCCAGGAGACACCAGCGGGGCTGCCGCTGCAGGGTAAATGGGATTCCTTGCCACCCAAGCTGTCAGAACTGCCA CTGAGCTAAAGATGGTGGGGCCACATGCTGACCCAGCCCCACATCCACATTCTGTTAGAATGTAGCTCAGGGAGC CCAGTGCCTTTGTCCTTCCCTTGGGGCTTGCCGGCCAGACTTCTCTCCCCTGCGGCTCCCACCTCTGCCTGACCC CAGCCTTAAACATAGCCCCTGGCCAGAGGCCTTGCTGGGTGGAGCCTCTGTGTGACTCCATACTCCTCCCACCAC AACACTCATCTGTCAAACACCAAGCACTCTCAGCCTCCCCGCCTTCAGCTGTCAGCTTTCTGGGGCTAACTTCTC GTTTTGAAAGCACAGCCCGTCAGGTCCGGCTCTGCGTCTCCCCTCTCTGCAGCCTGTGTAAGCTATTATAATTAAA ATGGTTTTCCGGGAA

MALSLTRAVAGGDEQVAMKCAIWLAEQRVPLSVQLKPEVSPTQDIRLWVSVEDAQMHTVTIWLTVRPDMTVASLK DMVFLDYGFPPVLQQWVIGQRLARDQETLHSHGVRQNGDSAYLYLLSARNTSLNPQELQRERQLRMLEDLGFKDL TLQPRGPLEPGPPKPGVPQEPGRGQPDAVPEPPPVGWQCPGCTFINKPTRPGCEMCCRARPEAYQVPASYQPDEE ERARLAGEEEALRQYQQRKQQQQEGNYLQHVQLDQRSLVLNTEPAECPVCYSVLAPGEAVVLRECLHTFCRECLQ GTIRNSQEAEVSCPFIDNTYSCSGKLLEREIKALLTPEDYQRFLDLGISIAENRSAFSYHCKTPDCKGWCFFEDD VNEFTCPVCFHVNCLLCKAIHEQMNCKEYQEDLALRAQNDVAARQTTEMLKVMLQQGEAMRCPQCQIVVQKKDGC DWIRCTVCHTEICWVTKGPRWGPGGPGDTSGGCRCRVNGIPCHPSCQNCH

GGGAGTCCGGGGACCCGCGATCAGCCCCGGAGGACGGGGTGGGGTCGCCCCAAACAGGAGCGCCGGGACCGCTGG GACCCCGCACTCGGCGTCCGCCGCCGGGTAGCCGGGCAGTGGAGGTCCCGGATGAGGCGACAATTTTTCCGG $\verb|CCCCCCTCCCAGTCCCGCCCCACTTCCGGGGCCGCCACTTTCACTTTCTCTTCCGCCGAAGCCGCTCCCCTTGC| \\$ GAAGAACTGGGGCCTCCCGGGAGGAGAGAGGGCTTTGCCTTGAAACCCGGGACGCCAGGGGCGCTCCCGCAAGTG GGGGTCCTCCGGGACTTGGAACGCCCCGGCTGGGTGGTCGTCCGGGCGTCCTTTCCCCACCTCCGCC TGGTCCCGTTTCCTCCTGCGCCCAGTGCGGACCTGTCTCGGCGCCCGCTGCCCTCTCACCGCCCCACGCAGGATC CCAGGAGGCACGGTCCCCCCAGGGGGATGGGCACAGCCAGATGGACGAGAAGACCAAGAAAGCAGAGGA AGAGCAACGGGTGCCCCTGAGTGTGCAACTGAAGCCTGAGGTCTCCCCAACGCAGGACATCAGGCTGTGGGTGAG GGACATGGTTTTTCTGGACTATGGCTTCCCACCAGTCTTGCAGCAGTGGGTGATTGGGCAGCGGCTGGCACGAGA ${\tt CCAGGAGACCCTGCACTCCCATGGGGTGCGGCAGAATGGGGACAGTGCCTACCTCTATCTGCTGTCAGCCCGCAA}$ CACCTCCCTCAACCCTCAGGAGCTGCAGCGGGAGCGGCAGCTGCGGATGCTGGAAGATCTGGGCTTCAAGGACCT GCCAGATGCAGTGCCTGAGCCCCCACCGGTGGGCTGGCAGTGCCCCGGGTGCACCTTCATCAACAAGCCCACGCG GCCTGGCTGTGAGATGTGCTGCCGGGCGCCCCGAGGCCTACCAGGTCCCCGCCTCATACCAGCCCGACGAGGA GGAGCGAGCGCCTGGCGGGCGAGGAGGAGGCGCTGCGTCAGTACCAGCAGGGAGTGCCTGCAGGGCACCATCC GCAACAGCCAGGAGGCGGAGGTCTCCTGCCCCTTCAT<u>TGA</u>CAACACCTACTCGTGCTCGGGCAAGCTGCTGGAGA GGGAGATCAAGGCGCTCCTGACCCCTGAGGATTACCAGCGATTTCTAGACCTGGGCATCTCCATTGCTGAAAAACC GCAGTGCCTTCAGCTACCATTGCAAGACCCCAGATTGCAAGGGATGGTGCTTCTTTGAGGATGATGTCAATGAGT ATCAGGAGGACCTGGCCCTGCGGGCTCAGAACGATGTGGCTGCCCGGCAGACGACAGAGATGCTGAAGGTGATGC TGCAGCAGGGCGAGGCCATGCGCTGCCCCCAGTGCCAGATCGTGGTACAGAAGAAGGACGGCTGCGACTGGATCC GCTGCACCGTCTGCCACACCGAGATCTGCTGGGTCACCAAGGGCCCACGCTGGGGGCCCTGGGGGCCCAGGAGACA CCAGCGGGGGCTGCCGCTGCAGGGTAAATGGGATTCCTTGCCACCCAAGCTGTCAGAACTGCCACTGAGCTAAAG ATGGTGGGGCCACATGCTGACCCAGCCCCACATCCACATTCTGTTAGAATGTAGCTCAGGGAGCTTCGTGGACGG CCTTGCTTGCTGTAGCGTTGTAGGGGCCCTGCCTGCACTGCGGTTGTCCACGGTCACATCTGCCCCAGTGCCTTT GTCCTTCCCTTGGGGCTTGCCGGCCAGACTTCTCTCCCCTGCGGCTCCCACCTCTGCCTGACCCCAGCCTTAAAC ATAGCCCCTGGCCAGAGGCCTTGCTGGGTGGAGCCTCTGTGTGACTCCATACTCCTCCCACCACACACCTCATCT GTCAAACACCAAGCACTCTCAGCCTCCCCGCCTTCAGCTGTCAGCTTTCTGGGGCTAACTTCTCTGCCTTTGTGG ACAGCCCGTCAGGTCCGGCTCTGCGTCTCCCTCTCTGCAGCCTGTGTAAGCTATTATAATTAAATTGCTTTTCCG **GGAA**

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GACGATGGGGCTGCGTGCAGGAGGAACGCTGGGCAGGGCCCGGCGCGCGGGTCGGGGGGCCCCGAGGGGCCCCGGGCC GAGCGGCGCGCAGGGCGCAGCATCCACTCGGGCCGCATCGCCGCGGTGCACAACGTGCCGCTGAGCGTGCT CATCCGGCCGCTGCCGTGTTGGACCCCGCCAAGGTGCAGAGCCTCGTGGACACGATCCGGGAGGACCCAGA CAGCGTGCCCCCATCGATGTCCTCTGGATCAAAGGGGCCCAGGGAGGTGACTACTTCTACTCCTTTGGGGGCTG CCACCGCTACGCGGCCTACCAGCAACTGCAGCGAGAGACCATCCCCGCCAAGCTTGTCCAGTCCACTCTCTCAGA CCTAAGGGTGTACCTGGGAGCATCCACACCAGACTTGCAGTAGCAGCCTCCTTGGCACCTGCTGCCACCTTCAAG AGCCCAGAAGACACACCTGGCCTCCAGCAGGCTGGGCCATGCAGAAGGGATAGCAGGGGTGCATTCTCTTTGCAC CTGGCGAGAGGGTCTGACTCTGGGCACCCCTCTCACCAGCTACAAGGCCTTGGACTCACTGTACAGTGTGGGAGC CCCAGTTCCCACCTCTGTGACAATAGGATCATGGCCTTACCCTTGAAGCATTACCGAGAAGGAGAACAGAGATGG GCTTGAAGAGCCACGTGCTGCCGGCTCCAAATTCCCAAGGACAAGGATCCCTCTGCATTTTTGTCTATGTAACCT TTCCACATAGCATGGATTCTGGAGATGGGTGGCTAATGGTATTGGTTCAACAACTCCACGAAGGTAGGGGTCACG TCTTGGATCCTTTTGCCTTAATCTCAGTGCTCGTTACTTCATGGTCCCAAGATGGCTGCTGTATCCCCAAGAATC ATGTCTGCGTTCAAGGAAGGAGGGGTGGAGGAAGAGGGAAGGGCCAAACTAGCTGGACCCGTCACCTTCTATCAGA AAGTAAAACCTCGTCAGAAGTCTGTTTCCTGCTCTCTCCCTCTGCATATCTTCACTTAGATGCCCTTGGCCCGAG CCAGCTACCATTGCACCTCTAGCTGCAAACAAAGCTAAGACAGCAGGGAACAGAATTGTCATGGCTGAATAGACC AATCGTGTTCCATCTACTGAGACTGGCACACTGCCTCCTGCAATAAAACTGGGATCCCATTACCAAGAGAGAAAT ATTTTCCCACAATCCTATGGGTTGGCAATTTGGGCTGGGCTCAACAGGGCAGTTCTGCTGCTCACACCTGGGATC CCTCATGGAGCTAAGGTCAGCTGTTACCTCAGCTGGGCCTGGATGGTCTAGGATAGCCTTACTCACTTGCCTGGC AGGTGACAGGCTGTTGGCTGGAATTGCTTGGTTCTCCTCCATGTGGCCTCCCAGCAGGCTAGCTCAGGCTTATT CACATGATGGCTTCAGGATTCCAAAGAGAGTGAGAGTTAGAAGCTGAAAGACTTCTTGAGTTCTTGGCCTGGAACT GGGACTAGGACAGTGTCACTTCTGCTAAGTTCTTTTGGTCAGAGCAAATCACAAGGCTTTACCCAGATTCAAGGG ATGAGAAACAGACTACATGTCTTGATGAGGGGAACCACAAAGAGCTTGTGGCCATTTTTCACCTATCACAAATAA TTTTGGATGGGTATTTATTTGGATAAAGGTATTTCCCTCTTCCCCCTTTCTCTCTGTCTCATGGGGCCTCACTCT GCCAAGTTGGAAGGCACTAAGACATTGTCCTGGCCCTCAGGGTCTAGGGGAAGAGGTGTTGGGGCAGGAAGTGAG TCTCTCCATGGGCTGGACCCACTGTAGTAGGAGTGCCTCCTTGTCTGCACTGCTGTATGGGGTTAGGCCAGGTA CTGCCCTCTAAGGGAACTTGGTCACTCGGCACTTTTAAGCCTCAGTTTCTCCAGTTCAATAATAAGGACAAGAGC TTTTCCCATGCATTCTCTTTCCCCGGGAAAGTTGACTGAGGTGACCAGTAATAGAATTGAAAAGGGAGAGTGTCT TCAGTGCAATGTGGCATCCTGGATTGGGTCTTGGAACAAAAACAGGACATTAGTGGGAAAATTGGAAATCTGAAA AAAGTCTGAATTTTAGTTAATATCCAATTTCAGTCTCTTGGTTTTGACAGATGTACCATGGTGATGAAGATGT TGACCTTGGGGTAGGCTGGGTGAAGGGTATACAGGAACTCTTTGTACTATCTCTGCAACTTCTCTGTAAATCTAG TATCATTCCAAAATAAAAGTTTATTTAATTT

 ${\tt MGLKSHVLPAPNSQGQGSLCIFVYVTSYMDYIQLQGKENLDCSGLNKQKIVFPHSMDSGDGWLMVLVQQLHEGRGHVLDPFALISVLVTSWSQDGCCIPKNHVCVQGRRGGGRGRAKLAGPVTFYQKVKPRQKSVSCSLPLHIFT$

GTCTGAGCGCCTCGGCTTTTTTTTTTTTTTCTCTCTCCTTCCCTGCAGCAGTGGCCGGTGTCCAGCTGCCTACT TTCTGCCCGGATCTCTGGCTCCTCATCTCTCCGGTCTCCGCAGACTAAAGCCCTCGGGATATGCAGCAGCCATGC CTGTGCACACGCTGAGCCCCGGAGCCCCGTCCGCCCCCGCCCTACCTTGCCGCCTGCGGACCAGGGTCCCTGGCT AGTACGTCAAGAGCCTGCACGTGGCCAACACCCGCCAGGAGCCTGTGCAGCCCCTGCTGTCCAAACAGCCGCTCT TGGACCTGGACATCCTCAGCAGCCTCATCGACTTGTGTGACAGCCCCGTGTCCCCTGCCGAGGCCAGCCGCACTC GCCGGGTGGACGTCCGCCCTGCCCGCCTCGCCTGCCCGGCCCTCCCATCACCCGGCCCTGCCGCCCTCCA GCTCGGTGACTGTTGAGGAGCGGGCCCGGGAGCGCGTTCCCTATGGCGTGTCGGTGGAGCGCAATGCCCGCG TGATCAAGTGGTTGTATGGGCTAAGGCAGGCTCGGGAGAGCCCAGCAGCTGAAGGCTAGGCGCCACTGGGCCTGG AATTCGCCACAGGACGGATCTTACAGAGGCAAGTGGTCCCTGGACCTCTCTTGCATCCATTCTCTAGACGGCCGT GTCAGAGGCTCCACCCTGTTGTGAACTTGGTATGGAGGCAAAGGCTTAGAGGCTGGACCAGCATTGTTGGGCAAG CTTTGCTGACTTCCTCTCCTTACCCAGCAGAACTCACCCTGGGGTCGGGGCAGTGGGGAGGGGCCTATCCACTG CTCTTCCTAGTCCTTGGCAGCTGGCCTAGGTGGGCAGACTATAGGAGGGACTGGTTAGGAGTCTGCATTGCTTTG ACTTCCCTCTCCTTGGTTAATAAACACAAATGCTTGTTTCTC

 $\tt CGGCCATCACCTGCAGGCAGGCACGCTCGTCTGCTTCTTGCATTGGGAAGTGGTGACACACGGTTACTTCGGCT$ TGGGTGTCGGTGACCAGCCGGGTCCCAATGATAAGAAGTCAGAACTGCTGCCAGCTGGGTGGAACAACAATAAAG ACCTGTATGTCCTCCGGTATGAGTATAAGGATGGGTCCAGAAAGCTCCTTGTGAAAGCCATCACCGTGGAGAGCA GCATGATCCTCAATGTGCTGGAATATGGCTCACAGCAAGTGGCAGACTTGACCCTGAACTTGGATGATTATATCG ATGCAGAACACCTGGGTGACTTCCACAGGACCTACAAGAACAGTGAGGAGCTTCGGTCTCGTATTGTGTCTGGAA TCATCACACCTATCCATGAGCAGTGGGAAAAGGCTAATGTAAGCAGTCCCCACCGGGAGTTCCCCCCTGCTACCG TGGGCCCGTTTGTTGTCGGGGGAGAAGACTTAGACCCTTTTGGGCCTCGGAGAGGTGGCATGATTGTGGATCCCC TGAGATCTGGCTTCCCAAGAGCACTTATTGACCCTTCCTCAGGCCTCCCGAACCGACTTCCTCCAGGCGCTGTGC CCCCAGGAGCTCGCTTTGACCCCTTTGGACCCATTGGGACCAGCCCACCCGGACCTAACCCAGACCATCTCCCCC CGCCGGGCTACGATGACATGTACCTGTGAAGGCCTCAAGAATGTAACATCCCAGGCTTCCCTCCATTCTCCTGGA GCTGCCACCGCTGTCCCCATCAGCAACCATGTTCTTGCAGGCTGGGGGCAAGGGATTCTGCTCATGTGTTTGCAG ACCGGCTGGGATAGCCTCCCCACCCCTTATCAGAGCCAAGACACCTGCTGCAGCTCTCCACCTAGCTGCAGATAG CTCCCAAAGAGAAATCAGTGTGTCTCTTTCACCATCAGCTCCTCCCCTTTCACCACCAGCTCCTCTCCACTTCCC AAGGGAGACTCCGGCAACCTTCAGCAACATATATCCTCGACCAGATGCAGTGCTATAAGAACAGAACGCATTTTG GATGTTATTATTAAGAACCAAATGTCAATACAGAATTCATGTTGCCGGTTTCCCACTTTTCTTTTTACATTAATG CATAGCTGCTTCCATTTATGAGACTTTAGAGTTTGAGTTTCTGTAGGGCTGAATGACTCTTTTTCCTGCCCAGGG CCCATTCTTGCTTCTCAGGCACCTTCCGTTTATTAATTGCCATTGCTCCTGACATCACTAAGATGGGTCCCCTTC TGGCTGCATGAATGGAAATGAGTGACTGGAAATCCCATAGGCCACAAGAATGACTTTCACAAGGGCAGGAACATT GTGGAAAGACTGCATCATTCTGATGAGGCAAAATCCTCCAGCTATTCCTGTCTGGGCCAGTTTTGTAGGTCCATC TGTGCATGGGCAGCAGTAGTCAAAAAGCCAAGGAAAAAACAGAGCAGACCTGAAGGCTAATCTTATTTTTGCCAC TAACTTAGTGAATGACCCTAAGCAAGTTCCTTCTCCTCTTAGGGCCTTGTGCCAAGCCTATGAAATTGGAGGTGG CTTTCCTGCTCTAAAGCATTTTGATGTCTCATTCTGTGTTTTGGTAACCCCTATAAACTGGGGCAGAGGAAAAGAA TGATGGTTCAAGGCCATACTTCCCTTGAACCTTGTGTGGTTCTTGCCTAACTCTGTGGTTTTTGGACCCCATGGG GCCCAGACAGAGCACAGGAGCATGGGCTGCCTCTGAGTGTGGTGTTGAACTTCGGGAGGAGCAGGGAGCCCTGCA CCTTGTGTCCTGGCCCACCTGACCTTTGGTGTTCTCCGGATCCTTTTCAGCCCGAGGCCTGACAGACGCGGGCAG TGATGAGCCCTGTTCTGGAGTGGAAAGAGCACGATAGAGCACCAGGCTAAGAGGCACGAGATCAAGGCGGTAGTC AATTAGGACCTATTATTTACCTGTAGGTAAGCAAGCTACTGTAGCTCTTCTGAGGTATCTGCCAGGCTGTTTTCT GTAGCCTCAGATTGCCTATCTGCTTAGCCTGAGAACAGGTAGATGAAAACTAAACTGATGCCTAGGCCCAGGGTC AGTCTCAGATGGAAGCTGGGCCTGGGTGGGGAGGCTAGCATGCGTGGCTCCCTGGGTATTTCTGTCAGTCCCCAT GGCAAGCAGTGATTTAGTAAAACACCCCAGAGTCAGGGAAGCCAACCACCTTGAAACCTTTAGAACATCTCTGCT TTGGAGAAAGACCCAGAGATCAGGCAGAGGTGCAGATTCAATCATTACTCATAACCTTTGAGAGATGGCAAATGG GAGGAGTGTTAGTCTTTGTTTTGGAATTGGACCATTCTTGCAACCAAAAGGACTTAGAGCAGTTTGCTCATAAAG ACATCCTTTATTATAAAAGGAAGTATTTAAAGGATGATAGAGACCATCAGATAGAAGCAGGGAAGGTAGATAACT TTTAGGACCTTGATGTGAGGAAAAGATAAAATTTAAACAATAAATTTGCCACTTAGATTTTCTAGCAGCAAAGTC CGAAAAGATAGTTATATACAAAATTCTGTTTTCTGAAAACAAAATTGTGATTCACCTTCAGAATTGGCCATTTTT TTTGTGAGTTTCCTTGCATCAAGGACACTGAGAAACACAGTCATTGTCTTAGGTGTTCTATGGGAGGAAGTGAAT AGAGCCTTTAGGAACTTCCTGGTCAAGCTTATGGTGCTTATTTTGATCTGGGCCACTTCCCTCCTTCCAGTCATG AGTAATCATCAAGGAGCAAGTTGGAGTGTTTCAGGTGTATATTTTGTAGAACCCAAAAGATTGGAGCCTTAACAA TAAACATCAGCACT

GCGACGCCGAGGTACTAGGCAGAGCCGTGGAACCGCCGCCAGGTCGCTGTTGGTCCACGCCGCCCGTCGCGCC ${\tt GCCCGCCCGCTCAGCGTCCGCCGCC} {\tt CATC} {\tt GGAGTGCAGGTGGAAACCATCTCCCCAGGAGACGGCGCACCTT}$ GGACAGAACAAGCCCTTTAAGTTTATGCTAGGCAAGCAGGAGGTGATCCGAGGCTGGGAAGAAGGGGTTGCCCA GATGAGTGTGGGTCAGAGAGCCAAACTGACTATATCTCCAGATTATGCCTATGGTGCCACTGGGCACCCAGGCAT $\tt CATCCCACCACTGCCACTCTCGTCTTCGATGTGGAGCTTCTAAAACTGGAA{\color{red}{\bf TGA}}{\bf CAGGAATGGCCTCCTCCCTT}$ AGCTCCCTGTTCTTGGATCTGCCATGGAGGGATCTGGTGCCTCCAGACATGTGCACATGAGTCCATATGGAGCTT ACACCTCTGTTTCCCCTTTCCCCTTTCTCCTCGTATGTGTGTTTACCTAAACTATATGCCATAAACCTCAAGTTAT ${\tt TCATTTTATTTTGTTTTCATTTTGGGGTGAAGATTCAGTTTCAGTCTTTTGGATATAGGTTTCCAATTAAGTACA}$ CATAGCAGATTTGAGGCGCTGTTGAGGACTGAATTACTCTCCAAGTTGAGAGATGTCTTTGGGTTAAATTAAAAG $\tt CTGCCTTTGAAAGTAGATCATGTTCACTGCAATGCTGGACACTACAGGTATCTGTCCCTGGGCCAGCAGGGACCT$ $\tt CTGAAGCCTTCTTTGTGGCCTTTTTTTTTTTTCATCCTGTGGTTTTTCTAATGGACTTTCAGGAATTTTGTAATC$ TCATAACTTTCCAAGCTCCACCACTTCCTAAATCTTAAGAACTTTAATTGACAGTTTCAATTGAAGGTGCTGTTT GTAGACTTAACACCCAGTGAAAGCCCAGCCATCATGACAAATCCTTGAATGTTCTCTTAAGAAAATGATGCTGGT CTCAGCCCCTTCTCACCCCTTTGCTGTCCTGTGTAGTGATTTGGTGAGAAATCGTTGCTGCACCCTTCCCCCAGC AAA

MGVQVETISPGDGRTFPKRGQTCVVHYTGMLEDGKKFDSSRDRNKPFKFMLGKQEVIRGWEEGVAQMSVGQRAKL TISPDYAYGATGHPGIIPPHATLVFDVELLKLE

 ${\tt MGVQVETISPGDGRTFPKRGQTCVVHYTGMLEDGKKFDSSRDRNKPFKFMLGKQEVIRGWEEGVAQMSVGQRAKLTISPDYAYGATGHPGIIPPHATLVFDVELLKLE}$

GGCACGAGGGGCAAGCGGAACGCGGCAGCGGGCTGGGCCTGTGCGGCCGCCGGAGCGCTTTGGAAGGCGCA GGCCCGCTTCTTTCTCGAGTCGGCCGGCTGGGACTTGCAGATCGCGCTAGCGAGCTTTTATGAGGACGGAGGGGA TGAAGACATTGTGACCATTTCGCAGGCAACCCCCAGTTCAGTGTCCAGAGGCACAGCCCCCAGTGATAATAGAGT GACATCCTTCAGAGACCTCATTCATGACCAAGATGAAGATGAGGGGAAGAGGGAAGGCCAGAGGTTTTATGCTGG GGGCTCAGAGAGAGTGGACAGCAGATTGTTGGCCCTCCCAGGAAGAAAGTCCCAACGAGCTGGTGGATGATCT CTTTAAAGGTGCCAAAGAGCATGGAGCTGTAGCTGTGGAGCGAGTGACCAAGAGCCCTGGAGAGACCAGTAAACC GAGACCATTTGCAGGAGGTGGCTACCGCCTTGGGGCAGCACCAGAGGAAGAGTCTGCCTATGTGGCAGGAGAAAA GAGGCAGCATTCCAGCCAAGATGTTCATGTAGTATTGAAACTCTGGAAGAGTGGATTCAGCCTGGATAATGGAGA ACTCAGAAGCTACCAAGACCCATCCAATGCCCAGTTTCTGGAGTCTATCCGCAGAGGGGAGGTGCCAGCAGAGCT TCGGAGGCTAGCTCACGGTGGACAGGTGAACTTGGATATGGAGGACCATCGGGACGACGACGTTTGTGAAGCCCAA AGGAGCCTTCAAAGCCTTCACTGGCGAGGGTCAGAAACTGGGCAGCACTGCCCCCCAGGTGTTGAGTACCAGCTC TCCAGCCCAACAGGCAGAAAATGAAGCCAAAGCCAGCTCTTCCATCTTAATCGACGAATCAGAGCCTACCACAAA CATCCAAATTCGGCTTGCAGACGGCGGGGGGGTGCTGCAGAAATTTAACCACAGCCACAGGATCAGCGACATCCG ACTCTTCATCGTGGATGCCCGGCCAGCCATGGCTGCCACCAGCTTTATCCTCATGACTACTTTCCCGAACAAAGA GCTGGCTGATGAGGAGCCCTGAAGGAAGCCAACCTGCTCAATGCTGTCATCGTGCAGCGGTTAACATAACC GCCCAGCCAGCTGCCTGCCTCCTGTGTTTCCCATGGCCAGTGGCCATGCCCCATGGGGATCGCCCCTCCT СААССААААААААААААААААА

MAAERQEALREFVAVTGAEEDRARFFLESAGWDLQIALASFYEDGGDEDIVTISQATPSSVSRGTAPSDNRVTSF RDLIHDQDEDEEEEEGQRFYAGGSERSGQQIVGPPRKKSPNELVDDLFKGAKEHGAVAVERVTKSPGETSKPRPF AGGGYRLGAAPEEESAYVAGEKRQHSSQDVHVVLKLWKSGFSLDNGELRSYQDPSNAQFLESIRRGEVPAELRRL AHGGQVNLDMEDHRDEDFVKPKGAFKAFTGEGQKLGSTAPQVLSTSSPAQQAENEAKASSSILIDESEPTTNIQI RLADGGRLVQKFNHSHRISDIRLFIVDARPAMAATSFILMTTFPNKELADESQTLKEANLLNAVIVQRLT

 $\label{thm:licdcdefrkikpknskqaereekrvlglvllrge} MTVGKSSKMLQHIDYRMRCILQDGRIFIGTFKAFDKHMNLILCDCDEFRKIKPKNSKQAEREEKRVLGLVLLRGE\\ NLVSMTVEGPPPKDTGIARVPLAGAAGGPGIGRAAGRGIPAGVPMPQAPAGLAGPVRGVGGPSQQVMTPQGRGTV\\ AAAAAAATASIAGAPTQYPPGRGGPPPPMGRGAPPPGMMGPPPGMRPPMGPPPMGIPPGRGTPMGMPPPGMRPPPP\\ GMRGLL$

GGCACGAGGCTTCTGGCCTTCTCCTGTCAGCAGTTCCTCAGTCAACATGTACTTCAGATCTTCCTGGGCTTATGT GCAGAAAATCACTTCCATCCAGGGAATTCTAGCCCAGGGCATTGGAAACAGCAGGGGCAGCAGTATTCCCATGTA AGCTGTTGGTTTGAAAATGCAGAAGGTCAGGAGAGAGAGGAGGTGGCTCCAAACCCTGGTCTGCAAGGACAGAGGAG AGAGAAACCTCAAGGGCATTCCCCAGCCCACTCCAAAGACAGTCAGCAAGTCCTAGAAAAAGGCAAC<u>ATG</u>GTGGTA GAAACAGAGCCCAGCTCAGCCCAAAGACCAAACCCTGTGCAGCTAGACAAAGGCTTGAAGGAATTAGAAACCTTG AGATTTGGAGCAATCAACTGTAGAGAGTATGAACCGGACCATAACCTGGAATCAAACTTTATTACAAACCCGAGG CTCAGCAGACACCAGAGAACACATTCAGAAGAGAAGCCTTATTTGTGCAGGGAGTGTGGGCAAAGCTTTAGAAGT AAGTCCATCCTCAATAGACATCAGTGGACTCACTCAGAGGAGAAGCCCTATGTTTGCAGCGAGTGTGGGCGAGGC TTTAGCGAGAAGTCATCCTTCATCAGACACCAGAGGACACACTCCGGTGAGAAACCCTATGTGTGCCTGGAGTGT GGACGAAGCTTTTGTGATAAGTCAACCCTCAGAAAACACCAGAGGATACACTCAGGGGAGAAGCCTTATGTTTGC AGGGAGTGTGGGCGAGGCTTTAGCCAGAACTCAGATCTCATCAAACACCAGAGGACACACTTGGATGAGAAGCCT TATGTTTGCAGGGAGTGTGGGCGAGGCTTTTGTGACAAGTCAACCCTCATCATACACGAGCGGACGCACTCTGGA GAGAAGCCTTATGTGTGTGGTGAGTGTGGCCGAGGCTTTAGTCGGAAATCACTCCTCCTTGTCCACCAGAGGACA ${\tt CAGAGGACGCACTCAAATGAGAAGCCTTATATTTGCAGGGAATGTGGGCGAGGCTTTTGTGACAAGTCAACCCTC}$ TCACTCCTCGTGTCCACCAGAGGACACCTCAGGGGAGAGCATTATGTTTGTAGGGAGTGTGGGCGAGGCTTT AGTCATAAGTCAAATCTCATCAGACACCAGAGGACACACTGACGGGAGAAACCTGTGTATGCAGGGGTCATGAAC AAGACCTGAGTGACCAGTCAAGCCTCATGTTACCCCAGAGAGACACATGGGGGAGTAGACCCTGTGTACACAGATT TATAGAGTACGGGCAACTGTAGCCATCAGTCGGCCTTGAGCATGCACAAAAGGACACACTTAGGAGAAGTTTA TGTGTAGGGACTGTGGGAAGGCTTTAGCAATAATCAACATTTACCAGACATCCAATGACAGCCTCAGGGGAAAGC GGTCTTTGTTTGTAGGATGTATGGGCAAAGCTTTTGTGATCACACACCACAGGGAGAATCTGCATGTGGGGACAC TGTGGAGCTCTGCCCAGATGACCTTTTCAGGGGTAACACCCCAGCTGCTTGAGAACACTGTTGCTGCTGGCAG TGCACCTTTGCAGGGGTACCTTCTGGCCCCAACCCTTGACTCAACGGGGACAACTCCAGAAGGTCATTCCAGATC CAGAGATCCCCATCGAACTGAAGGATCACTGGGTTGCAGACACATTGCAGGTCAGCTTCTTCCTCTGCCCAGTCC TGCCCTCACTCCCCAGTGAATCCTCAATTTTCTGTCTCGTTGTCTCAGATAATTGATTCTAAGACATGTTAG GTATATAAGGAGTGTAGATAAGGCTTCAGCCATGAGTCACCCCCCAGTAAGCCCCAGAGTATATTGAATAGAAAT TCTGCATGTGTGGGGAGAATGGACAAGGACTTAGGAAAAAGTCCTCATCAAAGAACAGCTTTTTTGGGACAAGCT TTACATGGGTGGGGGGGAAAATGTGAAACACATTAGCAATAAGTTAAACCTCATCTTGTACTAAAGGAGGACAC GAGGACAGTCTTGCTACCCCAAGTCACTACCTCACTCTGAGGGATTTTCAGGAAATGTCTTGACTCCCCC ATGTACTCTGTATGTGAGCGAAGATGGCAGTAACTGTTAAATAAGCATTCTTTTCTACTTCTTGGAATCAGATGA

MVVETEPSSAQRPNPVQLDKGLKELETLRFGAINCREYEPDHNLESNFITNPRTLLGKKPYICSDCGRSFKDRST LIRHHRIHSMEKPYVCSECGRGFSQKSNLSRHQRTHSEEKPYLCRECGQSFRSKSILNRHQWTHSEEKPYVCSEC GRGFSEKSSFIRHQRTHSGEKPYVCLECGRSFCDKSTLRKHQRIHSGEKPYVCRECGRGFSQNSDLIKHQRTHLD EKPYVCRECGRGFCDKSTLIIHERTHSGEKPYVCGECGRGFSRKSLLLVHQRTHSGEKHYVCRECRRGFSQKSNLIRHQRTHSNEKPYICRECGRGFCDKSTLIVHERTHSGEKPYVCSECGRGFSRKSLLLVHQRTHSGEKHYVCRECG RGFSHKSNLIRHQRTH

ACTTCCTTCAGCGCCAGCAGCGCGTAGCCGACCGCGTGCTCAAACAGCACGTGCAACAGCACCTGGAACGGGAGC CGGGGCGCGAGCGTCAACGCAACCTCAGCGTCTGCCGGAACCCGTTCCCAGGGCAGGCGCAGGCGCAGGCGCAGG CAGGCTCCAGAGGCCACGCCCCCCCCGACCAATCGGAGGCCGGGGACGACACCATCTCCGGCCTTTGGAG GGGCCGCCCAGGGTGGTATCGCCCGGAGCGCGGGCTGGGTGGTGCCGAGCGCGGGCGAGCGGGCCTTTTCCGGCC TCTGCAGCTGCGGGGGGGGGGTTGCCGGGGACGCGCGCCCCGGTCGGGCACTGCAGGCGGCGAAACGAC GGACGAGCCTCCCCGGCGGCGGGGGGGGGGGGGTGCATCCTTTCCTCCCACCCGTAACGGGAGCGGTGCCTGGCGCGC ${\tt TTGGTTTTTTTTTTAAATGACTGTAGCAGGCAG} \underline{{\tt TAA}} {\tt CGTGCGAAAGAAGACGCTCCAGCGTCTTCCTAGGCC}$ AGTTTCTTGTTGCTGCTGCACGGGACCCAGCTCCTTTTGCTGGGCCACGTGTTGCTCCTCCGCTTGGGCCGCCC CTGAATTCTGGGCGCTGGTGATCGCTGAGTGAATCGCAGCTGCTTCCCTGTCCTTGAGGGCGTCTTTTGGGCACT AAGTAGCGTATCCCCTGGTATGTTTTAAAGAGTCATTCGAAGGGGATTTTTAAAAATAATGTATAGCTATAAACT AAATCTAATATGTCAAACCTAAATGTGGTTGGTAAATCTTACTCTCATAATTTCAATATGGTTTACAGATGTGGT TGAATTCTGTTACACATGTCTACTTACGAGTCAGAATCGTTATTCCATTTAATATTTTAAAATGGAATTGCCAAG TTAATCCATACATTAGCATGTTAAATTATTTTAACCGTCGTGAATACATCAAAATAGACGATTCCAAAATGTAAT GGAAAATACTAATGCTAATACTTCAATTTACTTCATTATTTCTGCCCTTAATCCTGAATCTTCCTGGAGTTACAG CCTGGCCAACATGGTGAAACCCCGTCTCTACCAAAAAATAAAAAATTAGCTGGACGTGGTGGAGCATGTCTGTA ATCCCAGCTACTCGGGAGGCTGAGGAAGGAGAATCGCTTGAACCCGGGAGGCAGAGGCTGCACTCTAGCCTGGGC **AACAGAGCAAGGCTCTGTC**

 ${\tt MSYGQQSWVKSGREVRVGRGVHPRQRPLPSRLPASSVASGPRPCAPRPRDPGVPVPYSGTSLPGAGWAVHPFLPPVTGAVPGALWRRPCWECSSRSFLRTINLFLFFVFGFFFLNDCSRQ}$

CGAACCCGGGAGCTGGCGCCATGGTGCTGTTGCACGTGCTGTTTGAGCACGCGGTCGGCTACGCGCTGCTGGCGC GCATCGTTCGTCTGGTGGCCTTTTGTCCCTTTGCCTCATCCCAGGTTGCCTTGGAAAATGCCAACGCCGTGTCTG AAGGGGTTGTTCATGAGGACCTCCGCCTGCTCTTGGAGACCCACCTGCCGTCCAAAAAGAAGAAGAAGTACTCTTGG GAGTTGGGGATCCCAAGATTGGTGCCGCAATACAGGAGGAGTTAGGGTACAACTGCCAGACTGGAGGAGTCATAG CTGAGATCCTGCGAGGAGTTCGTCTGCACTTCCACAATCTGGTGAAGGGTCTGACCGATCTGTCAGCTTGTAAAG CACAGCTGGGGCTGGGACACAGCTATTCCCGTGCCAAAGTTAAGTTTAATGTGAACCGGGTGGACAATATGATCA TCCAGTCCATTAGCCTCCTGGACCAGCTGGATAAGGACATCAATACCTTCTCTATGCGTGTCAGGGAGTGGTACG GGTATCACTTTCCGGAGCTGGTGAAGATCATCAACGACAATGCCACATACTGCCGTCTTGCCCAGTTTATTGGAA TTCTGGATGCCTCACGGTCCTCCATGGGCATGGACATATCTGCCATTGACTTGATAAACATCGAGAGCTTCTCCA GTCGTGTGTGTCTTTATCTGAATACCGCCAGAGCCTACACACTTACCTGCGCTCCAAGATGAGCCAAGTAGCCC CCAGCCTGTCAGCCCTAATTGGGGAAGCGGTAGGTGCACGTCTCATCGCACATGCTGGCAGCCTCACCAACCTGG ACACTCCAAAATATGGACTCATTTTCCACTCCACCTTCATTGGCCGAGCAGCTGCCAAGAACAAAGGCCGCATCT $\tt CCCGATACCTGGCAAACAAATGCAGTATTGCCTCACGAATCGATTGCTTCTCTGAGGTGCCCACGAGTGTATTCG$ GGGAGAAGCTTCGAGAACAAGTTGAAGAGCGACTGTCCTTCTATGAGACTGGAGAGATACCACGAAAGAATCTGG ATGTCATGAAGGAAGCAATGGTTCAGGCAGAGGAAGCGGCTGCTGAGATTACTAGGAAGCTGGAGAAACAGGAGA AGAAACGCTTAAAGAAGGAAAAGAAACGGCTGGCTGCACTTGCCCTCGCGTCTTCAGAAAAACAGCAGTAGTACTC ATGGAATGGAAGACCCATCTATCTCTTCTCCAAACCCAAGAAAAAGAAATCTTTTTCCAAGGAGGAGTTGATGA GTAGCGATCTTGAAGAGACCGCTGGCAGCACCAGTATTCCCAAGAGGAAGAAGTCTACACCCAAGGAGGAAACAG TTAATGACCCTGAGGAGGCAGGCCACAGAAGTGGCTCCAAGAAAAAGAGGAAATTCTCCAAAGAGAGGAGCCGGTCA GCAGTGGGCCTGAAGAGGCGGTTGGCAAGAGCAGCTCCAAGAAGAAAAAGTTCCATAAAGCATCCCAGGAAG ATTAGAATGCAAATGGACATTCTCTGGGAGGTGGGGCATACCATAGCCCAAGGTGACATTTCCCACCCTGTGCCG TGTTCCCCAATAAAAACAAATTCACAAG

TGATACATCGTTGCTCATTTTGCAGAACATAACAGTTGCACATTGCAAGAGTCAACTTGCTTCGGGTCTTTTCAT GCTCATGGCGGTATTGAGCGGAGTCCGCTGGCTGACCCGAGCGCTGGTCTCCGCCGGGAACCCTGGGGCATGGAG AGGTCTGAGTACCTCGGCCGCGCGCACGCTGCATCGCGGAGCCAGGCCGAGGACGTGAGGGTGGAGGGCTCCTT TCCCGTGACCATGCTTCCGGGAGACGGTGTGGGGCCTGAGCTGATGCACGCCGTCAAGGAGGTGTTCAAGGCTGC GGTGCTGAGTTCCATGAAGGAGAACAAAGTGGCCATCATTGGAAAGATTCATACCCCGATGGAGTATAAGGGGGGA GCTAGCCTCCTATGATATGCGGCTGAGGCGTAAGTTGGACTTATTTGCCAACGTAGTCCATGTGAAGTCACTTCC TGGGTATATGACTCGGCACAACAATCTAGACCTGGTGATCATTCGAGAGCAGAAGAGGGGAGTACAGCTCTCT GGAACATGAGAGTGCAAGGGGTGTGATTGAGTGTTTGAAGATTGTCACACGAGCCAAGTCTCAGCGGATTGCAAA GTTCGCCTTTGACTATGCCACCAAGAAGGGGCGGGGCAAGGTCACTGCTGTCCACAAGGCCAACATCATGAAACT TGGGGATGGGTTGTTCCTGCAGTGCTGTGAGGAAGTTGCTGAACTGTACCCCAAAATCAAATTTGAGACAATGAT CATAGACAACTGCTGCATGCAGCTGGTGCAGAATCCTTACCAGTTTGATGTGCTTGTGATGCCCAATCTCTATGG GAACATTATTGACAATCTGGCTGCTGGCCTGGTTGGGGGAGCTGGTGTGGTCCCTGGTGAGAGCTATAGTGCAGA ATACGCAGTCTTTGAGACGGGTGCCCGGCACCCATTTGCCCAGGCAGTGGGCAGGAATATAGCCAATCCCACGGC CATGCTGCTGTCGGCTTCCAACATGCTGCGGCATCTTAATCTTGAGTATCACTCCAGCATGATCGCAGATGCGGT GAAGAAGGTGATCAAAGTTGGCAAGGTGCGGACTCGAGACATGGGCGGCTACAGCACCACAACCGACTTCATCAA GTCTGTCATCGGTCACCTGCAGACTAAAGGGAGCTAGAGCCCTTTATTTCTTCCAACCTTGCAAGGACCACACTC $\tt CCCATACCCTTCAGTGCAGTGTACCAGGGAAGAGACCTTGTGCCTCTAAGCAGTGGACCATGGTCACCCCTTGCT$ GGGTAGAGCCTAGGTTGTCCTTGGGCCGGCTTCCTTAGGGGACAGACTGTTGGGTGGTGATGGGGATTGTTAGGA TGGAGCCCAGGCCACATGGATGATGATTCTCCCCCACAGGTTCGAACCTCTGACATGGGTGGCTATGCTACT CAATAAAGAACATGAACCAAAA

MAVLSGVRWLTRALVSAGNPGAWRGLSTSAAAHAASRSQAEDVRVEGSFPVTMLPGDGVGPELMHAVKEVFKAAA VPVEFQEHHLSEVQNMASEEKLEQVLSSMKENKVAIIGKIHTPMEYKGELASYDMRLRRKLDLFANVVHVKSLPG YMTRHNNLDLVIIREQTEGEYSSLEHESARGVIECLKIVTRAKSQRIAKFAFDYATKKGRGKVTAVHKANIMKLG DGLFLQCCEEVAELYPKIKFETMIIDNCCMQLVQNPYQFDVLVMPNLYGNIIDNLAAGLVGGAGVVPGESYSAEY AVFETGARHPFAQAVGRNIANPTAMLLSASNMLRHLNLEYHSSMIADAVKKVIKVGKVRTRDMGGYSTTTDFIKS VIGHLQTKGS

GTGCTGGGCCTCGCGCAGCCCGGGACCACCAAGGTCCCAGGCTCGACCCCGGCCCTGCATAGCAGCCCGGCACAG $\tt CCGCCGGCGGAGACAGCTAACGGGACCTCAGAACAGCATGTCCGGATTCGAGTCATCAAGAAGAAAAAGGTCATT$ ATGAAGAAGCGGAAGAAGCTAACTCTAACTCGCCCCACCCCACTGGTGACTGCCGGGCCCCTTGTGACCCCCACT ${\tt CCAGCAGGGACCCTCGACCCCGCTGAGAAACAAGAAACAGGCTGTCCTCCTTTGGGTCTGGAGTCCCTGCGAGTT}$ TCAGATAGCCGGCTTGAGGCATCCAGCAGCCAGTCCTTTGGTCTTGGACCACACCGAGGACGGCTCAACATTCAG TCAGGCCTGGAGGACGCCGATCTATATGATGGAGCCTGGTGTGCTGAGGAGCAGGACGCCGATCCATGGTTTCAG GTCACATCATACAAGGTCCAGTTCAGCAATGACAGTCGGACCTGGTGGGGAAGTAGGAACCACAGCAGTGGGATG GACGCAGTATTTCCTGCCAATTCAGACCCAGAAACTCCAGTGCTGAACCTCCTGCCGGAGCCCCAGGTGGCCCGC TTCATTCGCCTGCCCCAGACCTGGCTCCAGGGAGGCGCCCTTGCCTCCGGGCAGAGATCCTGGCCTGCCCA GTCTCAGACCCCAATGACCTATTCCTTGAGGCCCCTGCGTCGGGATCCTCTGACCCTCTAGACTTTCAGCATCAC AATTACAAGGCCATGAGGAAGCTGATGAAGCAGGTACAAGAGCAATGCCCCAACATCACCCGCATCTACAGCATT GGGAAGAGCTACCAGGGCCTGAAGCTGTATGTGATGGAAATGTCGGACAAGCCTGGGGAGCATGAGCTGGGGGAG CCTGAGGTGCGCTACGTGGCTGGCATGCATGGGAACGAGGCCCTGGGGCGGGAGTTGCTTCTGCTCCTGATGCAG TTCCTGTGCCATGAGTTCCTGCGAGGGAACCCACGGGTGACCCGGCTGCTCTCTGAGATGCGCATTCACCTGCTG CCCTCCATGAACCCTGATGGCTATGAGATCGCCTACCACCGGGGTTCAGAGCTGGTGGGCTGGGCCGAGGGCCGC TGGAACAACCAGAGCATCGATCTTAACCATAATTTTGCTGACCTCAACACCACTGTGGGAAGCACAGGACGAT GGGAAGGTGCCCACATCGTCCCCAACCATCACCTGCCATTGCCCACTTACTACACCCTGCCCAATGCCACCGTG GCTCCTGAAACGCGGGCAGTAATCAAGTGGATGAAGCGGATCCCCTTTGTGCTAAGTGCCAACCTCCACGGGGGT GAGCTCGTGGTGTCCTACCCATTCGACATGACTCGCACCCCGTGGGCTGCCCGCGAGCTCACGCCCACACCAGAT GATGCTGTGTTTCGCTGGCTCAGCACTGTCTATGCTGGCAGTAATCTGGCCATGCAGGACACCAGCCGCCGACCC TGCCACAGCCAGGACTTCTCCGTGCACGGCAACATCATCAACGGGGCTGACTGGCACACGGTCCCCGGGAGCATG AATGACTTCAGCTACCTACACCAACTGCTTTGAGGTCACTGTGGAGCTGTCCTGTGACAAGTTCCCTCACGAG GCAGGAGTGGTGAGGGACAAGGACACGGAGCTTGGGATTGCTGACGCTGTCATTGCCGTGGATGGGATTAACCAT GACGTGACCACGGCGTGGGGGGGGATTATTGGCGTCTGCTGACCCCAGGGGACTACATGGTGACTGCCAGTGCC GAGGGCTACCATTCAGTGACACGGAACTGTCGGGTCACCTTTGAAGAGGGCCCCTTCCCCTGCAATTTCGTGCTC ACCAAGACTCCCAAACAGAGGCTGCGGGGCTGCTGGCAGCTGGGGCCCAAGGTGCCCCCGGACCTTCGCAGGCGC CTGGAGCGGCTAAGGGACAGAAGGAT**TGA**

MWGLLLALAAFAPAVGPALGAPRNSVLGLAQPGTTKVPGSTPALHSSPAQPPAETANGTSEQHVRIRVIKKKKVI
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EGYHSVTRNCRVTFEEGFFPCNFVLTKTPKQRLRELLAAGAKVPPDLRRRLERLRGQKD

CGGCGCCCACCTTCGGGAGGATCAGTATCTGGCACCAATTCTGACCCAGTCATTTGTGATCCCTGGCTCTTGTGA TATGCTGAAGATTTCCAGGCAGTTTTTGTGGAACACCTCCCCGTCCAGCTCTAATCAAGCACCATATAAACAAGA AATTGCCTGGTCAAATCTGTGAGGACTGTATTCTGACTGCCAAAGAGATCAATACTGACACCAGA**ATG**GCAGCTA CTCTCAAGTCATTAAAACTTGTAAGATACCGAGCATTTTGCAGTCCTTCTGCCTTTTGGTGCAGTCCGAAGTGTGT CATACTGGAATGTGAGCAGCACACAGCATGGGGGACAGGACCCTCCAGAACACATTAGCCTCTGCCATTCTGCCA · AATTCAGCAAGACTTCTTCCTCTAAGGCCAGTACATTGCAGCTGGGCTCACCCAGGGGCCACAGGAGTTGATGAAG AGGACGTAGAAGTGTTTGATTCCTTTGAAAACATGCGAGTTTTCCTACAGCTAAGACCAGAATACCGTGTTCACA GCTATAATGCATCTGAGACTTCTCAGCTCCTGTCTGTTTCAGAAGGTGAACTAATTTTGCACAAAGTCAGAGTTA ATCAAAATAATCTCCAGGCTCAAGTCATTGTTGATTATTTGTGTAAGCTGAGCTCTTTGCCTGCAGAGCAGCATC CTGTCTTGCTGGGCAGTACCAGCTTTGCTCTGCTCTGCCAGCTGAGTGTGAAGAAGATACAGCTCTTTGATACCC AAGATCTGATCAATGTTTTGAAAGCTTTTGTCATTTTAGGAATCCCTCACTCCCATTCAATGCTAGATGTGTATG ${\tt AGACCAAGTGTTGCCATCAGGTATGGGAGATGAATATGGATCAGCTCCTTTTGGTGGCTGATCTCTGGAGGTACT}$ TAGGCCGCAAAGTACCTAGGTTTTTAAACATTTTTTCTAGTTATCTTAATTTGCACTGGAAGGATCTATCCTTGT CTCAGCTAGTTCACTTAATTTATGTTATAGGTGAAAATCGTCAGGTATCCCAGGACCTAATGCAAAAATTGGAAT CATTGATCCTTAAATATATAGATTTGATCAATTTGGAGGAGGTTGGTACCATCTGTTTGGGGGTTCTTTAAATCAA GTACTAATCTCTCTGAATTTGTCATGCGGAAAATTGGAGACTTGGCTTGTGCTAACATTCAGCATCTGAGTAGTC AGATAGCTCCTCAGCGAATTCCTTCCCTGGGAGTTCAAGGTGTCATGCACCTGACTCTTTACTGCTCGGCCTTAC GCTTCCTGAATGAAGGAGTAATGAATGCAGTGGCTGCGTCTTTGCCTCCTAGAGTGGCACACTGTCGAAGTAAAG ATGTTGCCAAGATTCTGTGGTCATTTGGAACTCTGAATTATAAGCCACCCAATGCAGAAGAATTTTACTCCAGCC TGGCATTTTTGGAGTACTTTCCAGTAGAGTTAATTGATTTCGCTCTCAGTCCAGGGTTTGTCAGGTTAGCTCAGG AGAGAACTAAGTTTGACCTCCTTAAGGAACTATATACCCTCGATGGTACAGTTGGCATTGAGTGTCCAGATTACA GAGGCAATCGTCTTAGTACTCACCTTCAGCAAGAGGGGTCTGAATTGCTGTGGTATTTAGCAGAGAAGGATATGA ATTCAAAGCCTGAATTCTTAGAAACTGTCTTTTTACTGGAGACCATGCTGGGGGGGCCCCAGTACGTCAAGCACC ATATGATTTTGCCTCATACCCGATCTTCTGACTTAGAAGTCCAGCTTGATGTTAACCTGAAGCCATTACCATTTA ATAGAGAAGCCACGCCGGCTGAAAATGTAGCCAAATTAAGGCTTGAGCATGTGGGAGTCAGCCTTACAGATGATT TGATGAATAAGTTACTAAAAGGGAAAGCAAGAGGACATTTCCAGGGCAAAACTGAGTCAGAGCCTGGGCAGCAGC CCATGGAGTTGGAGAATAAGGCAGCTGTACCTCTGGGGGGGCTTCCTTTGCAATGTAGCAGATAAATCAGGGGCCA GGAACCAGTATTGCTATGGCTCCAGGGATCTCCTTGGACTGCACAATATGAAGAGGCGGCAGCTGGCTCGGCTTG GCTACCGTGTGGTAGAGTTATCCTACTGGGAATGGCTCCCACTACTGAAACGAACTCGCTTAGAAAAGTTGGCGT $\tt TTCTTCATGAGAAAGTATTCACCTCTGCTCTC\underline{\textbf{TGA}} \\ \texttt{AGGGCCATTTAGGGGCCATTTCTATGGCAAAGCTATAGGTGT}$ ATACTGTACCAGGTGTTGCAAAATGATTATAAAAGCCAGAATGTAAGTTTGGCGATAAAATAGTGTGTTGAGGAG ACTTAATTGTATCCAAGGCAGGTTAGAGCTAGTGTATGTTACTGTGAATTGTAATGTAGTTGGATTGTACAAATT ACTGCAAATGTATACATGTTACTCTTAGTAAATAATAAACATCTTAATATGTCCTACGGTC

MAATLKSLKLVRYRAFCSPSAFGAVRSVSYWNVSSTQHGGQDPPEHISLCHSAKKVKNICSTFSSRRILTTSSAH PGLEFSKTSSSKASTLQLGSPRATGVDEEDVEVFDSFENMRVFLQLRPEYRVHSYNASETSQLLSVSEGELILHK VRVNQNNLQAQVIVDYLCKLSSLPAEQHPVLLGSTSFALLCQLSVKKIQLFDTQDLINVLKAFVILGIPHSHSML DVYETKCCHQVWEMNMDQLLLVADLWRYLGRKVPRFLNIFSSYLNLHWKDLSLSQLVHLIYVIGENRQVSQDLMQ KLESLILKYIDLINLEEVGTICLGFFKSSTNLSEFVMRKIGDLACANIQHLSSRSLVNIVKMFRFTHVDHINFMK QIGEIAPQRIPSLGVQGVMHLTLYCSALRFLNEGVMNAVAASLPPRVAHCRSKDVAKILWSFGTLNYKPPNAEEF YSSLISEIHRKMPEFNQYPEHLPTCLLGLAFLEYFPVELIDFALSPGFVRLAQERTKFDLLKELYTLDGTVGIEC PDYRGNRLSTHLQQEGSELLWYLAEKDMNSKPEFLETVFLLETMLGGPQYVKHHMILPHTRSSDLEVQLDVNLKP LPFNREATPAENVAKLRLEHVGVSLTDDLMNKLLKGKARGHFQGKTESEPGQQPMELENKAAVPLGGFLCNVADK SGAMEMAGLCPAACMQTPRMKLAVQFTNRNQYCYGSRDLLGLHNMKRRQLARLGYRVVELSYWEWLPLLKRTRLE KLAFLHEKVFTSAL

GTGCTCGGCGTTGAGCTCCTGCAGCCGCCGCCGCTGCAGTGGTCGTCCCTGCCCTCCCCGGCCCCGGGGTGCACC CCGCAAGGCTCCCGCTGGTGTCCCTGGAGCATGGGAGGCTGCTGAGCGTGAGTGGCGGTGTCTGGCAGGAGCTGC $\tt GTGGCAGGGGGGGGGTCC{\color{red} ATC} GCTGCAGCCAACAAGGGCAACAAGCCCAGAGTCCGGGGTATCCGCTTTGCGGCA$ GGCCACGATGCAGAAGGATCCCACAGCCACGTCCACTTTGATGAGAAGCTGCATGACTCGGTGGTCATGGTCACC CAGGAGAGTGACAGCAGCTTTCTGGTCAAGGTTGGCTTCCTGAAGATCCTGCACAGGTATGAGATTACCTTCACT $\verb|CTGCCCCAGTGCACAGGCTGAGCAAGGATGTCCGCGAGGCACCTGTCCCCAGCCTGCACCTCAAGCTCCTCAGC|\\$ GTGGTGCCCGTCCCTGAAGGTTATAGTGTCAAGTGTGAGTACTCGGCGCACAAAGAGGGCGTCCTCAAAGAGGAG ATACTGCTAGCCTGCGAAGGTGGCACTGGCACCTGTGTGCGCGTGACGGTGCAGGCCCGCGTCATGGACCGGCAC CACGGCACGCCCATGCTGCTGGATGGTGTCAAGTGTGTGGGCGCCGAGCTGGAATACGACTCAGAGCACAGCGAC GACATGCTGCGTGATGGTGTGGCTTCCTCGCCCCTCTCTGGGGTGGGGTGGGGGTGGAGTGGCCTTGCCCACGC CTCTCACCTCTGCCTTCATTTGTGCTGCCACCCTGCCCCTCGTCCTCCTCTCCCACTTCCTCTCTGTG GGGTGGGTCCCCCACCCCCACCCCAAGCCACAGGGACTCCCACCAGGGTCTGGGAAGGACGGAGCTGGCTCTG TGGCGTCGTGGCCCCATTACTGCTGCCTTGCTTCAGCCACCTCTCCTGCCCCTAGTCCCCACTGCTGTCCA $\verb|CCATGAGTAGGAGGGGGGGGGCCCCCAGCCCCCAGCCCCTCAGGTCTGTGTTACTTGGTTTTTAAGCGACTGGT|\\$ AAAAAA

MAAANKGNKPRVRGIRFAAGHDAEGSHSHVHFDEKLHDSVVMVTQESDSSFLVKVGFLKILHRYEITFTLPPVHR LSKDVREAPVPSLHLKLLSVVPVPEGYSVKCEYSAHKEGVLKEEILLACEGGTGTCVRVTVQARVMDRHHGTPML LDGVKCVGAELEYDSEHSDWHGFD

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GTAACCAAGGGCGCTTCCTTGTGGGCAGCTGCAGGCCCCATCCTCCTCCTCCTCTCTGGCAGGGCCCCATCCTG
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GTCCACTCCCCTTTTGTGGGGGTGAACGTTTTAACAGCC

ATCGCGCGCGCTTCAACATCCCGCCGTCCACGCTGAGCACGATCCTGAAGAACAAGCGCGCCATCCTGGCGTCG GAGCGCAAGTACGGGGTGGCCTCCACCTGCCGCAAGACCAACAAGCTGTCTCCCTACGACAAGCTCGAGGGCTTG CTCATCGCCTGGTTCCAGCAGATCCGCGCCGCCGCCGGCCTGCCGGTCAAGGGCATCATCCTCAAGGAGAAGGCGCTG AGTCCGGCCGCGGTGCCCTCGGAGGGCAGTGGCGGGAGCACTACTGGTTGGCGCGCTCGGGAGGAGCAGCCGCCG TCGGTGGCCGAGGGCTACGCCTCGCAGGACGTGTTCAGCGCCACCGAGACCAGTCTATGGTACGACTTCCTGCCC GACCAGGCCGCGGGGCTGTGCGGAGGCGACGGACGGCCGCGTCAAGCCACCCAGCGCCTGAGCGTCCTGCTATGC GCCAATGCCGACGGCAGCGAGAAGCTGCCCCCGCTGGTGGCCGGCAAGTCGGCCAAGCCCCGCGCAGGCCAAGCC GGCCTGCCCTGCGACTACACCGCCAACTCCAAGGGTGGTGTCACCACCCAGGCCCTGGCCAAGTACTTGAAGGCC CAGCAGGTGAAGGGCCACTACCGCCAGGCCATGCTGCTCAAGGCCATGGCCGCGCTAGAGGGCCAGGATCCCTCA GCCGCCTGCTTTCGTGAGGCTGGCTTTGGGGGTGGCCCTAATGCCACCACCACCACTTCCCTCAAGAGTGAGGGA AGTGATGAAGAGAGGAGGAAGATGAGGAGAGCTCCTCGGAGGGCTTGGAGGCTGAGGACTGGGCCCAGGGAGTA GTGGAGGCCGGTGGCAGCTTCGGGGCTTATGGTGCCCAGGAGGAAGCCCAGTGCCCTACTCTGCATTTCCTGGAA GGTGGGGAGGACTCTGATTCAGACAGTGAGGAAGAGGACGATGAGGAAGAGGATGATGAAGATGAAGACGACGAT GATGATGAGGAGGATGGTGATGAGGTGCCTGTACCCAGCTTTGGGGAGGCCATGGCTTACTTTGCCATGGTCAAG AGGTACCTGACCTCCTTCCCCATTGATGACCGCGTGCAGAGCCACATCCTCCACTTGGAACACGATCTGGTTCAT GTGACCAGGAAGAACCACGCCAGGCAGGCGGGAGTTCGAGGTCTTGGACATCAAAGC<u>TGA</u>GTCACTGGACCTAGC TGTGCCCCCAACCTAGATTGGCAGCACCACCCCAGGGCAGAGGACTCTCTGGGCACCCGCTGTGCATGGAGCCAG AGTGCAGAGCCCCAGATCCTTTAGTAATGCTTCCCCTGGTCCTGCAACAGGCCCGGTCACCTCGGCCGGGCCCGG GGCTGAGGTCAGCCTCACTGCCTGCTTATTGCCTCTTTCTCAGAATCCTCTTTCCTCCCCATTTGGCCCTGGGCT CAGGGGACCAGGTGGGGCGGGTGGGGAGCTGTCCGGTGCTACCACACCGTGCCCTCAGTGGACTAACCACAGCAG CAGCCAGGGATGGGCCCTGGAGGTTCCCGGCCGGAGAGTGCCTCTCCCCTCTGCCATCCACGTCAGGTCTTTGGT GGGGGGACCCCAAAGCCATTCTGGGAAGGGCTCCAGAAGAAGTCCAGCCTAGGCCCCTGCAAGGCTGGCAGCC CCCACCCCCACCCCCAGGCCGCCTTGAGAAGCACAGTTTAACTCACTGCGGGCTCCTGAGCCTGCTTCTGCCTG GTTTCCAAGAGGCCCCCCACCGTGGAAGTAACCAAGGGCGCTTCCTTGTGGGCAGCTGCAGGCCCCATGCCTCTC $\tt CTCCCTCTCTGGCAGGGCCCCATCCTGGGCAGAGGGGCCTGGGCCCAGAGTCCAGCCGTCCAGCTGCTC$ CTTTCCCAGTTTGATTTCAATAAATCTGTCCACTCCCCTTTTGTGGGGGTGAACGTTTTAACAGCC

MDDFTASNGWLDRFRRRHGVVSCSGVARARARNAAPRTPAAPASPAAVPSEGSGGSTTGWRAREEQPPSVAEGYA SQDVFSATETSLWYDFLPDQAAGLCGGDGRPRQATQRLSVLLCANADGSEKLPPLVAGKSAKPRAGQAGLPCDYT ANSKGGVTTQALAKYLKALDTRMAAESRRVLLLAGRLAAQSLDTSGLRHVQLAFFPPGTVHPLERGVVQQVKGHY RQAMLLKAMAALEGQDPSGLQLGLTEALHFVAAAWQAVEPSDIAACFREAGFGGGPNATITTSLKSEGEEEEEE EEEEEEEGGEEEEEEGGEEELGEEEEVEEEGDVDSDEEEEEDEESSSEGLEAEDWAQGVVEAGGSF GAYGAQEEAQCPTLHFLEGGEDSDSDSEEEDDEEEDDEDEDDDDDEEDGDEVPVPSFGEAMAYFAMVKRYLTSFP IDDRVQSHILHLEHDLVHVTRKNHARQAGVRGLGHQS

GAGGTGCCCCAGCCGGAGCCCGCGCCCAGGCTCTCAGTCCAGCAGGCGTGTGCGGTGGCGCCCAGCGTCCG GTCACCACCCTCACCCAGACCATGCACGACCTCGCCGGGCTCGGCAGCCGCAGCCGCACCCTATCCCTG TCTCGACGGGCATCCGAATCCTCCCTGTCGTCTGAATCCTCCGAATCTTCTGATGCAGGTCTCTGCATGGATTCC AACGAGCAGTTTGCCATCAGACGCTTCCAGTCTATGCCGGTGAGGCTGCTGGGCCACAGCCCCGTGCTTCGGAAC GACAAGGAGAATGTGCGCTTCTGGAAGGCCGGGGTGGGAGCTCTCCGGGAAGAGGGGGGGCATGCTGGGGTGGT ACACATCCCAGCTCCACCCATGCTCTGGCAGAGTGGGCCAGCCGCAGGGAAGCCTTTGCCCAGAGACCCAGCTCG GCCCCGACCTGATGTGTCTCAGTCCTGACCGGAAGATGGAAGTGGAGGAGCTCAGCCCCCTGGCCCTAGGTCGC TTCTCTCTGACCCCTGCAGAGGGGGATACTGAGGAAGATGATGGATTTGTGGACATCCTAGAGAGTGACTTAAAG GATGATGATGCAGTTCCCCCAGGCATGGAGAGTCTÇATTAGTGCCCCACTGGTCAAGACCTTGGAAAAGGAAGAG GAAAAGGACCTCGTCATGTACAGCAAGTGCCAGCGGCTCTTCCGCTCCCGTCCATGCCCTGCAGCGTGATCCGG CCCATCCTCAAGAGGCTGGAGCGGCCCCAGGACAGGCACGCCCGTGCAGAATAAGCGGAGGCGGAGCGTGACC CCTCCTGAGGAGCAGGAGGCTGAGGAACCTAAAGCCCGCGTCCTCCGCTCAAAATCACTGTGTCACGATGAG GACGGAAAGCACCAAGACCTCAAGTACATCTCACCAGAAACGATGGTGGCCCTATTGACGGGCAAGTTCAGCAAC ATCGTGGATAAGTTTGTGATTGTAGACTGCAGATACCCCTATGAATATGAAGGCGGGCACATCAAGACTGCGGTG AACTTGCCCCTGGAACGCGACGCCGAGAGCTTCCTACTGAAGAGCCCCATCGCGCCCTGTAGCCTGGACAAGAGA GTCATCCTCATTTTCCACTGTGAATTCTCATCTGAGCGTGGGCCCCGCATGTGCCGTTTCATCAGGGAACGAGAC CGTGCTGTCAACGACTACCCCAGCCTCTACTACCCTGAGATGTATATCCTGAAAGGCGGCTACAAGGAGTTCTTC CCTCAGCACCCGAACTTCTGTGAACCCCAGGACTACCGGCCCATGAACCACGAGGCCTTCAAGGATGAGCTAAAG ACCTTCCGCCTCAAGACTCGCAGCTGGGCTGGGGAGCCGGAGCCGGGGAGCTCTGTAGCCGGCTGCAGGACCAG TGAGGGGCCTGCCAGTCCTGCTACCTCCCTTGCCTTTCGAGGCCTGAAGCCAGCTGCCCTATGGGCCTGCCGG GTTAGTTAAGTTGGGTTAATACCAGCTTAAAGGCAGTATTTTGTGTCCTCCAGGAGCTTCTTGTTTCCTTGTTAG GTCCCTGAGGATGGGTCAGAGCTAAACTCCTTCCTGGCCTGAGAGTCAGCTCTCTGCCCTGTGTACTTCCCGGGC CAGGGCTGCCCCTAATCTCTGTAGGAACCGTGGTATGTCTGCCATGTTGCCCCTTTCTCTTTTCCCCTTTCCTGT CCCACCATACGAGCACCTCCAGCCTGAACAGAAGCTCTTACTCTTTCCTATTTCAGTGTTACCTGTGTGCTTGGT CTGTTTGACTTTACGCCCATCTCAGGACACTTCCGTAGACTGTTTAGGTTCCCCTGTCAAATATCAGTTACCCAC TCGGTCCCAGTTTTGTTGCCCCAGAAAGGGATGTTATTATCCTTGGGGGCTCCCAGGGCAAGGGTTAAGGCCTGA ATCATGAGCCTGCTGGAAGCCCAGCCCCTACTGCTGTGAACCCTGGGGCCTGACTGCTCAGAACTTGCTGCTGTC TTGTTGCGGATGGATGGAAGGTTGGATGGATGGCTGGATGGCCGTGGATGCCCAGTGCCTTGCAT ACCCAAACCAGGTGGGAGCGTTTTGTTGAGCATGACAGCCTGCAGCAGGAATATATGTGTGCCTATTTGTGTGGA CAAAAATATTTACACTTAGGGTTTGGAGCTATTCAAGAGGAAATGTCACAGAAGCAGCTAAACCAAGGACTGAGC ACCCTCTGGATTCTGAATCTCAAGATGGGGGCAGGGCTGTGCTTGAAGGCCCTGCTGAGTCATCTGTTAGGGCCT TGGTTCAATAAAGCACTGAGCAAGTTGAG

6143/6881 FIGURE 5676A

GGGGAGGAAGAAGGCGAAGGCGAAGGGGTGGAGAGTGATATGAAGAGCGAGAAAAAGAGAGACAGCG GACGAGCAGATCCGGTATCTGGAATCCCGGCGCCTAGAACGTGTTTTTCGGGAGAGCAAAGGCTGTGTCTACGGC AGGCTGGGGATATAGCCTCTCCCTTCCGATGAAAAGAGAAAGGAAGAATGGACTACAGCCACCAAACGTCCCTAGT CCCATGTGGACAAGATAAATACATTTCCAAAAATGAACTTCTCTTGCATCTGAAGACCTACAACTTGTACTATGA AGGCCAGAATTTACAGCTCCGGCACCGGGAGGAAGAAGACGAGTTCATTGTGGAGGGGCTCCTGAACATCTCCTG CTGGCACTCTGGCTGTAACCTGGGGGGCTCAGGGAACCACTCTGAAGCCCCTGACTGTGCCCAAAGTTCAGATCTC AGAGGTGGATGCCCCGCCGGAGGGTGACCAGATGCCAAGCTCCACAGACTCCAGGGGCCTGAAGCCCCTGCAGGA GGACACCCCACAGCTGATGCGCACACGCAGTGATGTTGGGGTGCGTCGCCGTGGCAATGTGAGGACGCCTAGTGA CCAGCGGCGAATCAGACGCCACCGCTTCTCCATCAACGGCCATTTCTACAACCATAAGACATCCGTGTTCACACC AGCCTATGGCTCTGTCACCAACGTCCGCATCAACAGCACCATGACCACCCCACAGGTCCTGAAGCTGCTCAA CAAATTTAAGATTGAGAATTCAGCAGAGGAGTTTGCCTTGTACGTGGTCCATACGAGTGGTGAGAAACAGAAGCT GAAGGCCACCGATTACCCGCTGATTGCCCGAATCCTCCAGGGCCCATGTGAGCAGATCTCCAAAGTGTTCCTAAT GGAGAAGGACCAGGTGGAGGAAGTCACCTACGACGTGGCCCAGTATATAAAGTTCGAGATGCCGGTACTTAAAAG CTTCATTCAGAAGCTCCAGGAGGAAGAAGATCGGGAAGTAAAGAAGCTGATGCGCAAGTACACCGTGCTCCGGCT AATGATTCGACAGAGGCTGGAGGAGATAGCCGAGACCCCAGCAACAATCTGAGCCATGAGAACGAGGGGATCTGG CAAACCTCCCCAGCTCCGGCCAAGCCATCATTTGCTACCTGGAGCTGGATGTAGAAGTCAGCAGACAGCTCCCTA TCCCTGGACCCCTGCCCTCTTTTTCTGCTCACAAGGACTTTTGATTTTAGTTATAAGGAGGACCCAAAATGTG TGTGTGTACATGTGTGCACACATGGTACGTGTCCATGTGCCTACCTGATACTTTCACATGTAATTAAATTCCA GGCAACCAGCACAAGAGCCGTGAGCTTGGCACATGTGCTCGTGAGCAGGAAAATCAGAGGAGCCACTGATCT AGAGGGAAGAGGGTTCTCCAGGTTCACCATTTGGGTTGTTTATATGTTGGTAGAAATTCTCCCTGTATGCCTAGA AGGATCAGTGAATGTAAGAGCCTTGGAAATTAACAAAATAACAGCCACATAACCTTGCGGCAAGTCTGATGGAAA GAAAAAGATAAACCATCCGTGGGGTAGATGCAATAAGCCCACGTATTTTTACACTGGAAACGTTGATTGTTTTAA ATGACAAAGACATATGTGATGTTCTATGTGGAAACCTGTGAAGAGTGGATTCTGCCTCCATCTCTGCCTCCATGG CTACCTTTAGGAGACAGAGATCCTGTGTTTTCTCTGTACCCAGCTGACAGCCTGTCTCTATGGCGCTTCCT TGAGTGGAAGGAAATGTCTCAAGAAACAAAGATCTCGCTGGTGCGTACACAGTGCTGACCAGCTAGTGTGGCCAG GGCCTGGTGGCCTGGTGGCCAGGAAGTTTCAGGTTGAAGGGAAATGTCGAGGCTACCTGCAGATATGACAGGTGC CTTGAACGCAGCCCATCTTCATGTCATCAAAGGTCTTCCTGCACTTGAAGCTGGGGCGATGTTTGCAGTCAAGAC CATCTTGCTACTGAGTGTGGGGTTCAGGGAAGCTCTTTAGGCCACCTGGTGAAGGTGCATGGGGAGGATGGAGCT TCTCCTCAGCTCCTCTGAGCAGCCACCTATGTGATCTTTAAATCCAACCCCAATGGGAGAAAAGGGCAAGAACAG TCTGTGCCCTGGGACTCCTATCAGGAAGCTTGACAGGCAGCTGGGCATCAGTGCAGCTGATATCGTTTGAGGAGG TCTTTGAGCCTAGCTGGGGTAGAGGCACTGCCCATCTCTTCTCCACCTTCTCTCCACAGAATGTTTGCAGAGCTG CCTGGGCACCCTCCTGCCCCCGATTCATACCTATGGCTTCTTGAGAAGGCTCACAGCTGTGGTCTTAACGTAGAC CAGCACCAGCCCTGTGGGGCATGGAGTGGAAGCCCAGAAGGGCTTCTGCAAGCTGCACAGAACTGGGGTAAGAAG ACAAAGAGTAGCCACCGGGAGAGGCTTCCTTTGTTACAGCTGGGAAAGAACAGTTCTGTGAATGCAAACACCTCC TGAGTTTTGCAATTGAGAAAATGATTTGGAGAACTTCTCTTCTGGTAATTTTTATTTTGAATGTTCAGGGCCTTA GTTGGCCCCAGTAATTCTCCTTGGAGGACTTGGGAGAAGAATTTCCACAAAGCAAACTACTAACCACTAGCTCTT ACTGGACAGCGATTTCTGGCTTATAAGAGTTCTCTTTGATTTGCACTAGCACTACGATAGTGTTAGATGGGGAAA TACTGCAACATGTCCAGTTGGCCAGATCACTTTCCAAGGGAGCGATACTAAGGCAGACTCAGCTTTTTAAAGATG CCATTTTGTCCTGCCCTCTTGAGAGGTCATTTCTCACGTCCTAAGAACCTGATCAGAAATTTTGGAAGGGTTCTT TGAAATAGCAGCAGTTGAAACAGAGACACTTTGCCACAGTGTGGAGCAGATTTTCTCACTGGTATCACATGGTCT

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TGCAGTTTTGAACTCTTCGACCGATTTGTGGGAGTTTATGTAATTGCGTGCAATGAACCTGAAATTGTGTAAAGG ACAAAAGACCAGTTTATAGGGTTGGGTTTTTTTTCCAACTTGTGAAAAGCAGTTTAGCTGCATCTGTCTCCCCAC GGTGGAATTAAGCACAAGGTCACATTCTCTGTGATCACATGAGAGGGAAGGTGATGACTTAAATGGCAGGGGGTG GGGATTATCTTGGGGAGAGGCTGAAAAGCACAAAAGATAGTCTTCCCTGTACGTATTGGTGAAGAACGTGCACAA GGCTGGATGGACTTCAACTTGGAGTTGAGGTAGAGAGGATTTCTGGATATTAGTCACCCATCTGCAAGAAA AATGCTGAGGCCTCGGGTCAAGATTTTGATCTGAGACATGCTGATGCTTCAAGGAGAAATATTTTCACAATCCTC TCTTCCCTCACCAGAAGAGAACAGTACTCTCTCCTAGAAACCTCTAGGTAAACACATTTTATCCTAATATCGGTA GCATATAATGCCCCCCCAAAATATCTGTTTTCCATGCAAAAAAGTCTCAACAAGAAGTCTGTGGAGTTGAGTGG TTACTTCAAAGTGTCAGGAGAGTGAAGAAATTGGCCACAGAAGAGCAAGAAGCTCTCTTAAGAAAAGGGAATTCT CTTTAAAGAAACCACCACCAACAACAACAACCAAAAACCATGTTTTATGTCAAAGCTCTGTAGCACAGAGAAT TTTCCCAGGCTGGAGTGCAGTGGGATCTCAGCTCACTGCAACATCCGCCTCTGGGGTTCAAGTGATTCTCCT AGAGGTGGGGTTTCACCATCTTGGCCAGGCTGGTCTTGAACTCCTGACCTCGTGATCCACCCGCCTAGGCCTCCC AAAGTGTTGGGATTACAGGCGTGAGCCACTGTGCCCAGCCAAAAGAGAAATTTCTACATGAACAAGGCAATTTCA GTGTCTTACAGCGGCCAAACCATGACGTGAAGAATGAGATAGGAGACAGGAGATCACCATAAGCGTCCCTGATAT AGCAGCACATTTTCACGTTTCCACTTAAATCGTTTTGCACAAAGTCTTGCTTCGCTCAGATGAGATGAGATAT GATTTCCTAGAGATGTAAAAATAAGAATGAATGTGGCGCCCCCTTCTTCCAGATGTAATAGAAAGCTCTGCCCTA TCACAAGGGGGGTGTTGAAGCGCCCCTTGTGTTTTAACTGTATTTAACTGAGCACAAGATGCACAAGCTGTGGTG GGAAACCCTCAGTTTACCTTTGGAGTCTTCCCTGCAGATCGCAGACCTGTTTCCAGGCTGATGTTTCTGGTGTGT AATTGCTAGCGTTTCTGAAGGGTTTTCCCAATTGTTTTAGCCTTGTGAAGTATTCTTAATTATAACTTGCCTTTC AGCGATGGTACATGACTTGATTCAACGTTTGGTTCTGAACTTACACACTGATGCGTTTACTCATCTAACATAATC TGACAGGGCCTCAGCAAGGGAGCCATACATTTTGTAACATTTTGATATGTTTTAATGCATCTGACTTAGATCTT ACTGAAATAAAGCACTTTTCAAAGAG

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GTCTCAGCCGGTCGTCGCGACGTTCGCCCGCTCGCTCTGAGGCTCCTGAAGCCGAAACCAGCTAGACTTTCCTCC TTCCCGCCTGCCTGTAGCGGCGTTGTTGCCACTCCGCCACCATGTTCGAGGCGCGCCTGGTCCAGGGCTCCATCC TGCAGAGCATGGACTCGTCCCACGTCTCTTTGGTGCAGCTCACCCTGCGGTCTGAGGGCTTCGACACCTACCGCT GCGACCGCAACCTGGCCATGGGCGTGAACCTCACCAGTATGTCCAAAATACTAAAATGCGCCGGCAATGAAGATA TCATTACACTAAGGGCCGAAGATAACGCGGATACCTTGGCGCTAGTATTTGAAGCACCAAACCAGGAGAAAGTTT CAGACTATGAAATGAAGTTGATGGATTTAGATGTTGAACAACTTGGAATTCCAGAACAGGAGTACAGCTGTGTAG TAAAGATGCCTTCTGGTGAATTTGCACGTATATGCCGAGATCTCAGCCATATTGGAGATGCTGTTGTAATTTCCT GTGCAAAAGACGGAGTGAAATTTTCTGCAAGTGGAGAACTTGGAAATGGAAACATTAAATTGTCACAGACAAGTA ATGTCGATAAAGAGGAGGAAGCTGTTĄCCATAGAGATGAATGAACCAGTTCAACTAACTTTTGCACTGAGGTACC TGAACTTCTTTACAAAAGCCACTCCACTCTCTTCAACGGTGACACTCAGTATGTCTGCAGATGTACCCCTTGTTG TAGAGTATAAAATTGCGGATATGGGACACTTAAAATACTACTTGGCTCCCAAGATCGAGGATGAAGAAGGATCTT AGGCATTCTTAAAATTCAAGAAAATAAAACTAAGCTCTTTGAGAACTGCTTCTAAGATGCCAGCATATACTGAAG TCTTTTCTGTCACCAAATTTGTACCTCTAAGTACATATGTAGATATTGTTTTCTGTAAATAACCTATTTTTTCT CTATTCTCTGCAATTTGTTTAAAGAATAAAGTCCAAAGTCAGATCTGGTCTAGTTAACCTAGAAGTATTTTTTGTC TCTTAGAAATACTTGTGATTTTTATAATACAAAAGGGTCTTGACTCTAAATGCAGTTTTAAGAATTGTTTTTGAA TTTAAATAAAGTTACTTGAATTTC

 $\verb|CCAGGAGGCACGCTGGTTTTCCGGGGCCGCTCCATCGCGCCTTCCTCCTGCGCCTCGCTTCTCCGGTCCAGCCGC|\\$ CATCTTCCTTTCCGCACAGGGGCCGAGCGGGGCCATGCAGCCAACGCTGCTTCTCAGCCTCCTGGGAGCCGT GGGGCTGGCGGCTGTCAATTCCATGCCAGTGGATAACAGGAACCACAATGAAGGAATGGTGACTCGCTGCATCAT TGAGGTCCTCTAAATGCCTTGTCGAAGTCCAGCGCTCCACCCATCACCCCTGAGTGCCGCCAAGTCCTGAAGAC GAGTAGAAAAGACGTCAAAGACAAAGAGACAACTGAAAATGAAAACACAAAGTTTGAAGTAAGATTGTTAAGAGA CCCAGCTGATGCCTCGGAAGCCCACGAGTCCTCCAGCAGGGGAGGAGGAGGAGGAGGACATCCA GTGGAGCCTCTATCCCTCCGACAGCCAAGTCTCTGAAGAAGTGAAGACACGCCATTCTGAGAAGAGCCAGAGAGA GGATGAGGAGGAGGAGGAGGAGACTATCAAAAAGGGGAGCGAGGGGAAGATAGCAGTGAAGAGAAACACCT GAGTGGAGAGGCAGGGAGCCAGGAGAATCACCCCCAGGAGTCTAAAGGCCCAACCCCGAAGCCAGGAAGAATC CAGGCCCGACAGGTCCTCTAAGGAGGGAGTCTTCCCTCTGAGGAAAAGGGACACCCCCAGGAGGAATCTGAGGA GTCAAACGTCAGCATGGCCAGTTTAGGGGAAAAGAGGGACCACCATTCAACCCACTACAGGGCTTCAGAGGAAGA ACCTGAATATGGAGAAGAAATAAAGGGTTATCCAGGCGTCCAGGCCCCTGAGGACCTGGAGTGGGAGCGCTATAG GGGCAGAGGAAGTGAAGAATACAGGGCTCCAAGACCTCAGAGTGAGGAGGAGTTGGGATGAGGAGAAAAAA $\tt CTACCCAGCTTAGAGCTTGATAAGATGGCACATGGATATGGTGAAGAAAGTGAGGAAGAGAGGGGCCTTGAGCC$ GGGAAAGGGACGCCATCACAGAGGCAGGGGAGGGGAGCCACGTGCCTATTTCATGTCTGACACCAGAGAAGAGAA AAGGTTCTTGGGTGAAGGACACCACCGTGTCCAAGAAAACCAGATGGACAAGGCAAGGAGGCATCCACAAGGTGC GTGGAAAGACTGGACAGAAATTATCTCAACTACGGTGAGGAAGGGCCCCCAGGGAAGTGGCAGCAGCAGGGAGA CCTGCAGGACACTAAAGAAAACAGGGAGGAAGCTAGGTTTCAAGATAAACAATATAGCTCCCATCACACAGCTGA AAAGAGGAAGAGTTAGGGGAACTGTTCAACCCATACTACGACCCTCTCCAGTGGAAGAGCAGCCATTTTGAAAG AAGAGACAACATGAATGACAATTTTCTCGAGGGTGAGGAGAAATGAGCTGACCTTGAACGAGAAATTTCTT CCCAGAATACAACTATGACTGGTGGGAGAAAAAGCCCTTCTCTGAGGATGTGAACTGGGGGTATGAGAAGAGAAA CCTCGCCAGGGTCCCCAAGCTGGACCTGAAAAGGCAATATGACAGGGTGGCCCAACTGGACCAGCTCCTTCACTA TGAAAAGGACAGGCTGACCAGACAGTCCTGACAGAGGACGAGAAAAAAGAACTCGAAAACTTGGCTGCAATGGA TTTGGAACTACAGAAGATAGCTGAGAAATTCAGCCAAAGGGGCTGACTGTCATTGGAGCGGTGGGCACTGTTAAG AAGCAGCCATCACATGATCTGTTTTTCACCACTTCACTGAAAGACACCATTTATATACCCAAGGGCAGAAAGTAG AACTTACTATTCATTAAATGTTTGACACAATTGGAATTGTCTTTAATTTCTGTCAGAATGCTATTGAAAATGTGA ATTGCATGACTTGTAGCATATTCTTTTCTGCAAAATAGACATATTAACATGCTTATGACAATGACTGTGCTACTG TCTTTGGAAAATGTTTGTCTCAGTTGGAAATAATAAAAGATTCACCTGAGACC

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MLALRVARGSWGALRGAAWAPGTRPSKRRACWALLPPVPCCLGCLAERWRLRPAALGLRLPGIGQRNHCSGAGKA APRPAAGAGAAAEAPGGQWGPASTPSLYENPWTIPNMLSMTRIGLAPVLGYLIIEEDFNIALGVFALAGLTDLLD GFIARNWANQRSALGSALDPLADKILISILYVSLTYADLIPVPLTYMIISRDVMLIAAVFYVRYRTLPTPRTLAK YFNPCYATARLKPTFISKVNTAVQLILVAASLAAPVFNYADSIYLQILWCFTAFTTAASAYSYYHYGRKTVQVIK D

MDIRPNHTIYINNMNDKIKKEELKRSLYALFSQFGHVVDIVALKTMKMRGQAFVIFKELGSSTNALRQLQGFPFY GKPMRIQYAKTDSDIISKMRGTFADKEKKKEKKKAKTVEQTATTTNKKPGQGTPNSANTQGNSTPNPQVPDYPPN YILFLNNLPEETNEMMLSMLFNQFPGFKEVRLVPGRHDIAFVEFENDGQAGAARDALQGFKITPSHAMKITYAKK

GAGAGGCGCCCAGGCGGCGGCGGCGGCCCAGCTTCTTCTTTCCTCGCACAGCCAGGCGGCCCCTGCTCGAGT CCCGCGTCGCCATG GCCGCGGTTCCCGAGTTGCTGCAGCAGCAGGAGGAGGACCGCAGCAAGCTGAGATCTGTATTTACAGTGCACACAAAGACCACACTGCCCACGTTTCAGAGCCCAGAGTTTTCTGTTACAAGGCAACATGAAGACT TTGTGTGGCTACATGACACTCTTATTGAAACAACAGACTATGCTGGGCTTATTATTCCACCTGCTCCTACGAAGC CCGACTTTGATGGTCCTCGAGAGAAGATGCAGAAACTGGGAGAAGGTGAAGGGTCTATGACCAAAGAAGAATTTG CCAAGATGAAACAAGAACTGGAAGCTGAGTATCTCGCTGTGTTTAAGAAGACTGTGTCCTCCCATGAAGTCTTTC TTCAGCGGCTTTCTTCTCACCCTGTTCTCAGTAAAGATCGCAACTTTCATGTTTTCCTGGAATATGATCAGGATC TAAGTGTTAGGCGGAAAAATACTAAAGAGATGTTTGGTGGCTTCTTCAAAAGTGTGGTGAAAAGTGCTGATGAAG TCCTTTTTACTGGAGTTAAGGAGGTAGATGACTTCTTTGAGCAAGAGAAGAACTTCCTTATTAACTATTACAATA GGATCAAAGATTCTTGTGTGAAAGCTGACAAAATGACCAGATCTCATAAAAATGTTGCCGATGACTATATCCACA CCGCAGCCTGCTTACATAGCCTGGCTTTAGAAGAGCCCACAGTCATCAAAAAGTACCTATTGAAGGTTGCTGAGC TATTTGAAAAACTAAGGAAAGTAGAGGGTCGAGTTTCATCAGATGAAGATTTGAAGCTAACAGAGCTCCTCCGAT ACTACATGCTCAACATTGAAGCTGCTAAGGATCTCTTATACAGACGCACCAAAGCCCTCATTGACTATGAGAACT CAAACAAAGCTCTGGATAAGGCCCGGTTAAAGAGCAAAGACGTCAAGTTGGCTGAGGCACACCAGCAGGAGTGCT GCCAGAAATTTGAACAACTTTCCGAATCTGCAAAAGAAGAACTGATAAATTTCAAACGGAAGAGAGTGGCAGCAT TTAGAAAGAATCTAATTGAAATGTCTGAACTGGAAATAAAACATGCCAGGAACAATGTCTCCCTTTTGCAGAGCT TTTTCCTTGTGCATTTAATACCTCTGGGCAGAATCCAAATACTGGGTTCTCCCGTAGTTCGTCTTTAGTTACTAA GAAAGGGTGTAGGACACATTAGCCTTCTGGAAACAAGTAGAAGCCATCACCTGGCCCATGTCCCTACAAACCCAT GATTGTCAGGGAGGTGCCAGTTACAGCAGGTGATTCAGCTACTTGAGGTCGGTAACAGACCTTCCATTCCTCACT GAAGGTGGGGTTTGTGTTTTTGCCCTGTTACTCCACTGGTAGTCATCTGGTGTTTGTACTATAACAACAG CAAGAAAATCTCATTTATCTTTATATACTCTTTGCACCTCCTTTTTTTAGTCGAGATATAAATATTTGAGGGGAG AGAAATATCTACAGGTATATATGGAAACAAATAATGTGGTCTGCTTTATAAGATGGCCAGATCTACATTAGGAAA ATAAAGCATATAATAAAATAATCGTGCTACT

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SCVKADKMTRSHKNVADDYIHTAACLHSLALEEPTVIKKYLLKVAELFEKLRKVEGRVSSDEDLKLTELLRYYML
NIEAAKDLLYRRTKALIDYENSNKALDKARLKSKDVKLAEAHQQECCQKFEQLSESAKEELINFKRKRVAAFRKN
LIEMSELEIKHARNNVSLLQSCIDLFKNN

6157/6881 FIGURE 5689A

GAGAGGCCGCGGCCGCCAGCGTGGGGATGTCTAGGAGCTCGAAGGTGGTGCTGGGCCTCTCGGTGCTGACGG CGGCCACAGTGGCCGGCGTACATGTGAAGCAGCAGTGGGACCAGCAGAGGCTTCGTGACGGAGTTATCAGAGACA TTGAGAGGCAAATTCGGAAAAAAGAAAACATTCGTCTTTTGGGAGAACAGATTATTTTGACTGAGCAACTTGAAG CAGAAAGAGAGAAGATGTTATTGGCAAAAGGATCTCAAAAATCATGACTTGAATGTGAAATATCTGTTGGACAGA TTTTAAACTTGATCAAATAAAGGACAGTGGGTCATATAAGTTACTGCTTTCAGGGTCCCTTATATCTGAATAAAG GAGTGTGGGCAGACACTTTTTGGAAGAGTCTGTCTGGGTGATCCTGGTAGAAGCCCCCATTAGGGTCACTGTCCAG GTCTGATCAGTCGGCATGATGACGAAGCCACGAGAACATCGACCTCAGAAGGACTGGAGGAAGGTGAAGTGGAGG GAGAGACGCTCCTGATCGTCGAATCCGAGGATCAGGCATCAGTGGACTTATCGCACGACCAGAGTGGGGATTCCC TCAACAGTGATGAAGGAGACGTGTCTTGGATGGAGGAGCAGCTGTCCTACTTCTGTGACAAGTGCCAAAAATGGA GCTCAGCAGATGGCAAGGAGCAGTATGAAAGGCTGAAGCTGACATGGCAGCAAGTCGTCATGTTGGCAATGTACA **ACTTGTCTCTGGAAGGAAGTGGACGTCAAGGTTATTTCAGGTGGAAAGAAGATATCTGTGCTTTTATTGAGAAAC** ATTGGACTTTTTTACTAGGGAATAGGAAAAAGACGTCTACCTGGTGGAGCACCGTGGCAGGTTGCCTCAGCGTGG GAAGTCCCATGTACTTCCGTTCAGGTGCTCAGGAATTTGGAGAGCCAGGATGGTGGAAACTTGTTCATAACAAGC CCCCAACGATGAAACCTGAAGGAGAGATTGTCTGCCTCTACTTTGAAAATAAAAGCAGCCTCAAAACCAACTT TAGATCCCATCATTACTGTTGAGGGACTTAGAAAACGAGCAAGTCGGAATCCTGTGGAATCTGCCATGGAATTAA AAGAGAAAAGGTCTCGAACTCAGGAAGCAAAAGACATTAGAAGAGCCCAGAAGGAGGCCGCTGGCTTTCTTGACA GGAGCACATCTTCTACCCCTGTAAAATTCATAAGCCGAGGCCGCAGGCCAGATGTGATTCTGGAAAAAAGGCGAAG TGATGCCCCCACAAGCCTTGTTTCATGATGACGATGAGATGGAAGGCGATGGAGTCATAGACCCAGGGATGGAGT ACGTCCCACCCCTGCTGGGTCAGTAGCTTCTGGGCCAGTGGTTGGGGTCAGAAGAAGAAGGTCAGAGGCCCTGAAC ACACATCTTTGCAAACAAGGGCTAGAGAAAAGAGGAAGCCTCAGCTGGAGAAGGACACAAAGCCGAAAGAGCCCA GGTATACTCCCGTGAGCATCTACGAGGAAAAGCTGCTGCTCAAGAGGCTGGAAGCTTGTCCCGGTGCTGTTGCCA TGACTCCGGAAGCTCGGAGACTGAAACGCAAACTGATTGTCAGACAAGCGAAAAGGGATAGGGGATTACCACTTT TTGACTTGGATCAAGTTGTTAATGCTGCTCTTTTGTTAGTTGACGGGATTTATGGAGCCAAAGAAGGAGGAATTT CCAGACTTCCAGCTGGACAAGCCACGTACAGAACCACCTGTCAGGACTTCAGAATCCTTGACCGATACCAGACTT CCTTGCCGTCCAGGAAGGGATTTCGACACCAGACCACCAAGTTTTTGTATCGCTTGGTAGGATCAGAAGATATGG CTGTGGACCAGAGTATTGTCAGCCCTTATACCTCTCGGATCTTGAAACCTTATATCAGGCGTGATTATGAAACAA AGCCACCCAAACTGCAGCTCCTGTCACAGATTCGTTCCCACCTGCACAGGAGCGACCCTCACTGGACGCCGGAGC ${\tt CCGACGCACCTCTCGATTACTGTTATGTGCGGCCAAATCACATCCCAACGATCAACTCCATGTGTCAGGAGTTTT}$ TTTGGCCTGGCATTGACCTGTCTGAGTGTCTGCAGTACCCAGACTTCAGTGTTGTTGTTCTTTATAAAAAAGTCA TCATTGCCTTTGGCTTCATGGTTCCTGATGTGAAATACAATGAAGCTTACATTTCATTTCTGTTCGTCCACCCTG AATGGAGAAGAGCAGGGATTGCAACTTTCATGATCTATCATCTGATTCAGACCTGCATGGGCAAGGACGTAACCC TTCACGTCTCAGCAAGCAACCCTGCTATGCTACTGTACCAGAAGTTTGGATTCAAGACTGAAGAATATGTATTAG GCGAATACAGCTCACAGAGAAACGCATGTGCTATTGGAGAACAGGTCTTTGTGGAGATCTAAAGGCAGTGATTGA TAACCTGATGCTCTTGGAGAGAGATAACCTGTCTGTCATAACTTAAAGGATGAGAAAATGTGGTGTAGCTATTAA AGATTCATGCAGTCCCAAAAGGCACTGTCCTGGGATGATGAGAGATTATAAGGTGATTTCATAAAAGGAATCCAA CCCTGTGCCCGGCCATTGATGTGTTGTCATTGAATCCAGGAGGATTTCTAGGGCACTGAAGTTTTGTTGTTTCTT TTGCTGACTTTGGTTACAGTCAGAAAAAATAAACTAGATGTTTGTGTCTACATGTTCTACCTGTTGTACCTATTA

6158/6881 FIGURE 5689B

MDSSIHLSSLISRHDDEATRTSTSEGLEEGEVEGETLLIVESEDQASVDLSHDQSGDSLNSDEGDVSWMEEQLSY FCDKCQKWIPASQLREQLSYLKGDNFFRFTCSDCSADGKEQYERLKLTWQQVVMLAMYNLSLEGSGRQGYFRWKE DICAFIEKHWTFLLGNRKKTSTWWSTVAGCLSVGSPMYFRSGAQEFGEPGWWKLVHNKPPTMKPEGEKLSASTLK IKAASKPTLDPIITVEGLRKRASRNPVESAMELKEKRSRTQEAKDIRRAQKEAAGFLDRSTSSTPVKFISRGRRP DVILEKGEVIDFSSLSSSDRTPLTSPSPSPSLDFSAPGTPASHSATPSLLSEADLIPDVMPPQALFHDDDEMEGD GVIDPGMEYVPPPAGSVASGPVVGVRKKVRGPEQIKQEVESEEEKPDRMDIDSEDTDSNTSLQTRAREKRKPQLE KDTKPKEPRYTPVSIYEEKLLLKRLEACPGAVAMTPEARRLKRKLIVRQAKRDRGLPLFDLDQVVNAALLLVDGI YGAKEGGISRLPAGQATYRTTCQDFRILDRYQTSLPSRKGFRHQTTKFLYRLVGSEDMAVDQSIVSPYTSRILKP YIRRDYETKPPKLQLLSQIRSHLHRSDPHWTPEPDAPLDYCYVRPNHIPTINSMCQEFFWPGIDLSECLQYPDFS VVVLYKKVIIAFGFMVPDVKYNEAYISFLFVHPEWRRAGIATFMIYHLIQTCMGKDVTLHVSASNPAMLLYQKFG FKTEEYVLDFYDKYYPLESTECKHAFFLRLRR

 ${\tt MMNTNGKRRGTRYMFSRTFRKHGVVPLVTYMRIYKKGDIVDIKGMGTVQKGMPHKCYHGKTGRVYSVTQHAVGIV\\ SINVHTEHMKHSKSRDSFLKCMRKMIRKKKEAKEKEAHFVRTNGKEPELLELIPYEFMA}$

CAGTTGGAGGAGAGCAGATTAGTGCCATTGGAAGGGGCATATGTGTTGTTGCTGGGTATTTCCCTGGAGGATACGC AGAAGGAACTGGAACACATGGTCCGAAAGATTCTAAACCTGCGTGTATTTGAGGATGAGAGTGGGAAGCACTGGT ${\tt CGAAGAGTGTGATGGACAAACAGTACGAGATTCTGTGTGTCAGCCAGTTTACCCTCCAGTGTGTCCTGAAGGGAA}$ GTAAAACATACAGGCCGGAGCTTATCAAAGATGGCAAGTTTGGGGCCTACATGCAGGTGCACATTCAGAATGATG GGCCTGTGACCATAGAGCTGGAATCGCCAGCTCCCGGCACTGCTACCTCTGACCCAAAGCAGACGGATTCTCGCT $\verb|CTGTCTCCCAGGCTGGAGTGCAGTGGCGCGATCTCCGTTCATTGCAAGCTCCACCTCCCGGGTTCATGCCATTCT| \\$ **AG**TAGAGACGGGGTTTTACCATGTTAGCCAGGATGGTCTCGATCTCCTGCCCTGGTGATCCACCCGCCTCGGCCT $\tt CCCAAAGTGCTGGGATTACAGGTGTGAACTACCGCGCCCAGCCAAAGTTCACTAGGTTTTTTAAATGTCTTTTT$ CTGCTCCGGGATAATGCAGGATTCCACACGGCATTTAGTTGTCATTTCTGCTTAGTCTTCTCCAATCTGTGACAG TTCCTCAGCCTTTCCTTGTCTTTTTGTGACATTGATACTTTTCAAGAGTACTAGTCTACTGTTTTGTAGAATGTTT $\tt CTCACTTTGGGTTTTCTATGATTATTTGAGGTAATACATGTTGACAGGAATAGGAAATAGCACAGAAGTGATCT$ TGTGCCCTTCATAGTGCATCCTACCAGGAGGTATGTGGTATTGATTTGTCTTGTTACCTGTGATACCAGCCTTAT CTGGCTCATTCACAGCAGACAGCTCTCTCTCAGCTTTGCAGGGAAAGAAGCCAGCAGATGGCATTGACTCTGCTT GACCAGCTACATAATTTGAGAGGCCCAGTGTAAAATGAAAATGTGGGGCCCCTTGTTCAAAAAATATTACAAATT TCAAGGTGGTGACATAGAGCATAAAACGAAAGGTGGGGCCCCTCTGAAGGTGGGGCCTGTGTGACTGCTCGGCTG TTGTTGGTTCTGTCTGCCTCTCACAGTCATCCATCTTATCCCATTGGGTTTTAAATATGCCCAAATGTCTCCAAT TGAGAAATGCTTCCATTTCCTCCCTTCTGCTCTGCCACAGTGTCCTTGGGTCTGTAAAGGTTCTCACCGAGGGCC CCTGGAAATGGCTGGAGCCTTGTTTCCCAGGACGTCATTCTCTCTGGGTTTTTGTCTTGCCTCTGGCTACTCCCT CTGGTTTTATTTGATCATTATTCCATAGTTTTTAGTTATTCTGCTTTAACTCTATTTGGAGAAAAATTTTAG TCTTTTTTCATTCTAAATATTTTTCCGGAAATGGTAGAATAGTACATTTTGCCTTTAGAATCTTCACCTTTCTT TCAACCAGTACCCTCTTCTTGTTTAGGTCAAAGGGTACAAAGATGCAGTTATTTTGGGTGAGTAAGTCTCAAGAT ATAAAGGACGGTAACTGTGTGAGATGCTGGACATGTAATTTACTTGACTGTAGTAATCACTTCACTATGTGTATG

 $\label{top:mkavvqrvtrasvtvggeq} $$ MKAVVQRVTRASVTVGGEQISAIGRGICVLLGISLEDTQKELEHMVRKILNLRVFEDESGKHWSKSVMDKQYEIL$$ CVSQFTLQCVLKGNKPDFHLAMPTEQAEGFYNSFLEQLRKTYRPELIKDGKFGAYMQVHIQNDGPVTIELESPAP$$ GTATSDPKQTDSRSVSQAGVQWRDLRSLQAPPPGFMPFFCLSLPSSWDYRHVPPCPANFFVFF$

 ${\tt MKVELCSFSGYKIYSGHRRRYARTEGKVFRFLNSKCEGIRNLKLERLKENKLSGLLRKQKKAKQASKKTAMAAAK} \\ {\tt APTKAAPKQKTVKVVKVSAPQVGGKR} \\$

AAGTGCTGGTGCCCTCTGCCGCTCCCGTCTCTTTGGTTACGCTCGTCAGCCGGTCGGCCGCCGCCTCCAGCC GTGTGCCGCTATGGGAGTCCCGGCGTTCTTCCGCTGGCTCAGCCGCAAGTACCCGTCCATCATAGTCAACTGCGT GGAAGAGAGCCAAAAGAATGCAATGGTGTAAAGATTCCAGTTGATGCCAGTAAACCTAATCCAAATGATGTGGA AAATGAAGATGAAATGATGGTTGCAATTTTTGAGTACATTGACAGACTTTTCAGTATTGTAAGACCAAGAAGACT TCTCTACATGGCAATAGATGGAGTGGCACCACGTGCTAAAATGAACCAGCAGCGTTCAAGGAGGTTCAGGGCATC AAAAGAAGGAATGGAAGCAGCCAGAAGCAGCCGAGTCAGGGAAGAAATATTGGCAAAAGGTGGCTTTCTTCC TCCAGAAGAATAAAGAAAGATTTGACAGCAACTGTATTACACCAGGAACTGAATTCATGGACAATCTTGCTAA ATGCCTTCGCTATTACATAGCTGATCGTTTAAATAATGACCCTGGGTGGAAAAATTTGACAGTTATTTTATCTGA TGCTAGTGCTCCTGGTGAAGGAGAACATAAAATCATGGATTACATTAGAAGGCAAAGAGCCCAGCCTAACCATGA CCCAAATACTCATCATTGTTTATGTGGAGCAGATGCTGATCTCATTATGCTTGGCCTTGCCACACATGAACCGAA CTTTACCATTATTAGAGAAGAATTCAAACCAAACAAGCCCAAACCATGTGGTCTTTGTAATCAGTTTGGACATGA GGTCAAAGATTGTGAAGGTTTGCCAAGAGAAAAGAAGGGGAAAGCATGATGAACTTGCCGATAGTCTTCCTTGTGC AGAAGGAGAGTTTATCTTCCTTCGGCTTAATGTTCTTCGTGAGTATTTGGAAAGAGAACTCACAATGGCCAGCCT ACCATTCACATTTGATGTTGAGAGGAGCATTGATGACTGGGTTTTCATGTGCTTCTTTGTGGGAAATGACTTCCT CCCTCATTTGCCATCGTTAGAGATTAGGGAAAATGCAATTGACCGTTTGGTTAACATATACAAAAATGTGGTACA CAAAACTGGGGGTTACCTTACAGAAAGTGGTTATGTCAATCTGCAAAGAGTACAGATGATCATGTTAGCAGTTGG AAAGAGAATGAAGAGAGATCAACCAGCTTTCACTCCTAGTGGAATATTAACTCCTCATGCCTTGGGTTCAAGAAA TTCACCAGGTTCTCAAGTAGCCAGTAATCCGAGACAAGCAGCCTATGAAATGAGGATGCAGAATAACTCTAGTCC TTCGATATCTCCTAATACGAGTTTCACATCTGATGGCTCCCCGTCTCCATTAGGAGGAATTAAGCGAAAAGCAGA GAACAAATTTGATGTGGATGCAGCTGATGAGAAATTCCGTCGGAAAGTTGTGCAGTCGTACGTTGAAGGACTTTG $\tt CTGGGTTCTTAGATATTATCAGGGCTGTGCTTCCTGGAAGTGGTATTATCCATTTCATTATGCACCATTTGC_{i}$ TTCAGACTTTGAAGGCATTGCAGACATGCCATCTGATTTTGAGAAGGGTACGAAACCGTTTAAACCACTAGAACA ACTTATGGGGGTATTTCCAGCTGCAAGTGGTAATTTTCTACCTCCATCATGGCGGAAGCTCATGAGTGATCCTGA TTCTAGTATAATTGACTTCTATCCTGAAGATTTTGCTATTGATTTGAATGGGAAGAAATATGCATGGCAAGGTGT TGCTCTCTTGCCATTCGTGGATGAGGGAAGGCTACGAGCTGCCCTAGAAGAGGTATACCCAGACCTCACTCCAGA AGAGACCAGAAGAACAGCCTTGGAGGTGATGTCTTATTTGTGGGGAAACATCACCCACTCCATGACTTCATTTT AGAGCTGTACCAGACGGTTCCACAGAGCCAGTGGAGGTACCCCCTGAACTATGTCATGGGATTCAAGGAAAGTT TTCTTTGGATGAAGAAGCCATTCTTCCAGATCAAATAGTATGTTCTCCTGTTCCTATGTTAAGGGATCTGACACA GAACACTGTAGTCAGTATTAATTTTAAAGACCCACAGTTTGCTGAAGATTACATTTTTAAAGCTGTAATGCTTCC AGGAGCAAGAAAGCCAGCAGCAGTACTGAAACCTAGTGACTGGGAAAAATCCAGCAATGGACGGCAGTGGAAGCC TCAGCTTGGCTTTAACCGTGACCGGAGGCCTGTGCACCTGGATCAGGCAGCCTTCAGGACTTTGGGCCATGTGAT GCCAAGAGGCTCAGGAACTGGCATTTACAGCAATGCTGCACCACCACCTGTGACTTACCAGGGAAACTTATACAG GCCGCTTTTGAGAGGACAAGCCCAGATTCCAAAACTTATGTCAAATATGAGGCCCCAGGATTCCTGGCGAGGTCC GCAAACCCAGAATGCAGCCTTCCAGCCAAACCAGTACCAGATGCTAGCTGGGCCTGGTGGGTATCCACCCAGACG CAATTGGAAT**TAA**GCTTTTGTAAAGCTTTCCCAAATCCTTTCATCATCTACAGTTTTATGCTATTTGTGGAAAG ATTTCTTTCTCAAGTAGTTAGTTTTTAATAAAACTACAGTACTTTGTGTATTTCTTTTAACTGTGTATATTTCTAC CTTATAAAACACATTTGATGGAATAGGAGTACTGGTTTTTCATAATGGTTAAAAATGAAACCAGCTGTGGATTTC AAAACACAGTGTATTCTAGATCATCTAAGATCCATGCTGATTTTTATTGCACAAGAATTAGGTTTGAACTCTTGA GCTGGAACCTCAGCAAACTAGAGTATATATTGTTCAGTATTTCTTTGGAAACATTTCATTAATGTACTTGTCTTA

MGVPAFFRWLSRKYPSIIVNCVEEKPKECNGVKIPVDASKPNPNDVEFDNLYLDMNGIIHPCTHPEDKPAPKNED EMMVAIFEYIDRLFSIVRPRRLLYMAIDGVAPRAKMNQQRSRRFRASKEGMEAAVEKQRVREEILAKGGFLPPEE IKERFDSNCITPGTEFMDNLAKCLRYYIADRLNNDPGWKNLTVILSDASAPGEGEHKIMDYIRRQRAQPNHDPNT HHCLCGADADLIMLGLATHEPNFTIIREEFKPNKPKPCGLCNQFGHEVKDCEGLPREKKGKHDELADSLPCAEGE FIFLRLNVLREYLERELTMASLPFTFDVERSIDDWVFMCFFVGNDFLPHLPSLEIRENAIDRLVNIYKNVVHKTG GYLTESGYVNLQRVQMIMLAVGEVEDSIFKKRKDDEDSFRRRQKEKRKMKRDQPAFTPSGILTPHALGSRNSPG SQVASNPRQAAYEMRMQNNSSPSISPNTSFTSDGSPSPLGGIKRKAEDSDSEPEPEDNVRLWEAGWKQRYYKNKF DVDAADEKFRRKVVQSYVEGLCWVLRYYYQGCASWKWYYPFHYAPFASDFEGIADMPSDFEKGTKPFKPLEQLMG VFPAASGNFLPPSWRKLMSDPDSSIIDFYPEDFAIDLNGKKYAWQGVALLPFVDERRLRAALEEVYPDLTPEETR RNSLGGDVLFVGKHHPLHDFILELYQTGSTEPVEVPPELCHGIQGKFSLDEEAILPDQIVCSPVPMLRDLTQNTV VSINFKDPQFAEDYIFKAVMLPGARKPAAVLKPSDWEKSSNGRQWKPQLGFNRDRRPVHLDQAAFRTLGHVMPRG SGTGIYSNAAPPPVTYQGNLYRPLLRGQAQIPKLMSNMRPQDSWRGPPPLFQQQRFDRGVGAEPLLPWNRMLQTQ NAAFQPNQYQMLAGPGGYPPRRDDRGGRQGYPREGRKYPLPPPSGRYNWN

GGTCGTTTGTTGTGGCTGTTAAATTTTAAACTGCCATGCACTCGGCTTCCAGTATGCTGGGAGCGGTGAAGATGG AAGGGCACGAGCCGTCCGACTGGAGCAGCTACTATGCAGAGCCCGAGGGCTACTCCTCCGTGAGCAACATGAACG CCGGCCTGGGGATGAACGCATGAACACGTACATGAGCATGTCGGCGGCCCCCATGGGCAGCGGCTCGGGCAACA TGAGCGCGGCTCCATGAACATGTCGTCGTACGTGGGCGCTGGCATGAGCCCGTCCCTGGCGGGGATGTCCCCCG GCGCGGCCCATGGCGGCATGGGCGGCTCGGCCGGGGCGGCGGCGTGGCGGCATGGGGCCGCACTTGAGTC CCAGCCTGAGCCCGCTCGGGGGGCAGGCGGCCGGGGCCATGGGCGGCCTGGCCCCTACGCCAACATGAACTCCA CAAAGCCGCCCTACTCGTACATCTCGCTCATCACCATGGCCATCCAGCAGAGCCCCAACAAGATGCTGACGCTGA GCGAGATCTACCAGTGGATCATGGACCTCTTCCCCTTCTACCGGCAGAACCAGCAGCGCTGGCAGAACTCCATCC GCCACTCGCTCTCCAACGACTGTTTCCTGAAGGTGCCCCGCTCGCCCGACAAGCCCGGCAAGGGCTCCTTCT GGACCCTGCACCCTGACTCGGGCAACATGTTCGAGAACGGCTGCTACCTGCGCCGCCAGAAGCGCTTCAAGTGCG CACAGGCTCAACTCGGGGAGGCCGCCGGGCCGGCCTCCGAGACTCCGGCGGCCACCGAGTCGCCTCACTCGAGCG CCTCCCGTGCCAGGAGCACAAGCGAGGGGGCCTGGGAGAGCTGAAGGGGACGCCGGCTGCGGCGCTGAGCCCCC TGCCGCCTGAGGCCCACCTGAAGCCGGAACACCACTACGCCTTCAACCACCCGTTCTCCATCAACAACCTCATGT CCTCGGAGCAGCACCACCACCACCACCACCACCACCACCACAAAATGGACCTCAAGGCCTACGAACAGG TGATGCACTACCCCGGCTACGGTTCCCCCATGCCTGGCAGCTTGGCCATGGGCCCGGTCACGAACAAAACGGGCC TGGACGCCTCGCCCTGGCCGCAGATACCTCCTACTACCAGGGGGTGTACTCCCGGCCCATTATGAACTCCTCTT GAGACTTTGGGGAGACGTGTTGCAGAGACGCAAGGGAGAAAATCCATAACACCCCCAACCCCAACACCCCCAA GACAGCAGTCTTCTTCACCCGCTGCAGCCGTTCCGTCCCAAACAGAGGGCCACACAGATACCCCACGTTCTATAT TCAAGCACCTGCAGATTCTGATTTTTTTGTTGTTGTTGTTCTCCTCCATTGCTGTTGTTGCAGGGAAGTCTTACT TAAAAAAAAAAAATTTTGTGAGTGACTCGGTGTAAAACCATGTAGTTTTAACAGAACCAGAGGGTTGTACTA TTGTTTAAAAACAGGAAAAAAAATAATGTAAGGGTCTGTTGTAAATGACCAAG

TCGCGTTCTGGGCCCCGGAGTCCGAGACAGGCGGGGACCCCGGCAGCTCCCGGTGCTATCTCTGAGCGGGTTCCG AGCCCCACTTCCGGGCGGTCAGAATTAGCCTCAGAGCGCCGAGCAACGACGCGCGGGGGACCTCCCGCCCATGAG GCCGGAAGGGGCGGGAAACGCTGCGGAATGGTCCCTGGGCGCAACGTCATTTCCGCGTACGGGGGAGGCGGG CCTGGAGTCTGAGCCGGCGCCCCTCAGTGTGAGGTGGTTTCTGCGGGTGAGGCTGGCGCCCGTACCATGAGCGAG GCGGACGGGCTGCGACAGCGCCGGCCCCTGCGGCCGCAGGTCGTCACAGACGATGATGGCCAGGCCCCGGAGGCT $\tt CTGCTTGGAGCCATGATGCTGGAATCTCCTATAGATCCACAGCCTCTCAGCTTCAAAGAACCCCCGCTCTTG$ CTTGGTGTTCTGCATCCAAATACGAAGCTGCGACAGGCAGAAAGGCTGTTTGAAAATCAACTTGTTGGACCGGAG TCCATAGCACATATTGGGGATGTGATGTTTACTGGGACAGCAGATGGCCGGGTCGTAAAACTTGAAAATGGTGAA GGTATCCGTGCAGGGCCCAATGGGACTCTCTTTGTGGCCGATGCATACAAGGGACTATTTGAAGTAAATCCCTGG AAACGTGAAGTGAAACTGCTGCTGTCCTCCGAGACACCCATTGAGGGGAAGAACATGTCCTTTGTGAATGATCTT ACAGTCACTCAGGATGGGAGGAAGATTTATTTCACCGATTCTAGCAGCAAATGGCAAAGACGAGACTACCTGCTT CTGGTGATGGAGGGCACAGATGACGGGCGCCTGCTGGAGTATGATACTGTGACCAGGGAAGTAAAAGTTTTATTG GACCAGCTGCGGTTCCCGAATGGAGTCCAGCTGTCTCCTGCAGAAGACTTTGTCCTGGTGGCAGAAACAACCATG GCCAGGATACGAAGAGTCTACGTTTCTGGCCTGATGAAGGGCGGGGCTGATCTGTTTGTGGAGAACATGCCTGGA TTTTCCATGCTGGATTTCTTATCTGAGAGACCCTGGATTAAAAGGATGATTTTTAAGCTCTTTAGTCAAGAGACG GTGATGAAGTTTGTGCCGCGGTACAGCCTCGTCCTAGAACTCAGCGACAGCGGTGCCTTCCGGAGAAGCCTGCAT GATCCCGATGGGCTGGTGGCCACCTACATCAGCGAGGTGCACGAACACGATGGGCACCTGTACCTGGGCTCTTTC AGGTCCCCCTTCCTCTGCAGACTCAGCCTCCAGGCTGTTTAGCCCTCCCAGATAGCTGCCCCTGCCACGCAGGCC AGGAGTCTTCACACTCAGGCACCAGGCCTGGTCCAGGAGGAGCTGTGGACACAGTCGTGGTTCAAGTGTCCACAT GCACCTGTTAGTCCCTGAGAGGTGGTGGGAATGGCTGCTTCATTCCTCGAGGATGCCCGGGCCCCACCTGGGCTT GTCTTTCTGTTTAGAGGGAAGTGTAACATATCTGCCATGAGGAACATAAATTCATGTAAAGCCATTTTCTCTTAA ACAAAACAAAACTTTCTAAGTACAGTCATTCTCTAGGATTTGGGAAGCTCCTTGCACTTGGAACAGGGCTCAGGT GGGTGGAGCAGTAAGGCACTACCCAGAGAGCTTGCTGCTGCGGCCCTGTCCTGCGGCCTCAAAGTTCTTTTAC TATATATAACGTGCGGTCATACCTTTCTTCGTTGTGGTGGGGATGGAAGAGCAGAGGGAGCATGGCCCAGGGGTG TTGAGGCCAGCGGTGAGAGCCGTGTTAGCCAAGACATGGAACTGTGTTCTCAAGGGTTATGTGGGGCGTGGGCTC CTCCGTGCTGACCATGCTGGAATTGGATGATTCTGCAATTCGGGACCTACTGCAGGGGTCCGTTTAGTAACGTCT TGTCTGTGATCTTTGTTCTTGACCTCTAGACCCCAAGATGTGAACAGTGCACGTGTTAATGTCATCTTTGCTCAT CGATAAATCG

MSEADGLRQRRPLRPQVVTDDDGQAPEAKDGSSFSGRVFRVTFLMLAVSLTVPLLGAMMLLESPIDPQPLSFKEP PLLLGVLHPNTKLRQAERLFENQLVGPESIAHIGDVMFTGTADGRVVKLENGEIETIARFGSGPCKTRDDEPVCG RPLGIRAGPNGTLFVADAYKGLFEVNPWKREVKLLLSSETPIEGKNMSFVNDLTVTQDGRKIYFTDSSSKWQRRD YLLLVMEGTDDGRLLEYDTVTREVKVLLDQLRFPNGVQLSPAEDFVLVAETTMARIRRVYVSGLMKGGADLFVEN MPGFPDNIRPSSSGGYWVGMSTIRPNPGFSMLDFLSERPWIKRMIFKLFSQETVMKFVPRYSLVLELSDSGAFRR SLHDPDGLVATYISEVHEHDGHLYLGSFRSPFLCRLSLQAV

AAAAAAGGTATCCGTTATGAAACTTCCAGAAAAACGAGCTACATTTTTCAGCAGCCGCAGCACGGTCCTTGGCAA GCAGCCCCGGGGGCCCGGTGGGGTCAGCAGGCCCACAGCCCCTGGGGACAGCTGCAGACGGGCACGAGGTCTTC TACGGGATCATGTTTGATGCAGGAAGCACTGGCACCCGAGTACACGTCTTCCAGTTCACCCGGCCCCCCAGAGAA ACTCCCACGTTAACCCACGAAACCTTCAAAGCAGTGAAGCCAGGTCTTTCTGCCTATGCTGATGATGTTGAAAAG AGCGCTCAGGGAATCCGGGAACTACTGGATGTTGCTAAACAGGACATTCCGTTCGACTTCTGGAAGGCCACCCCT CTGGTCCTCAAGGCCACAGCTGGCTTACGCCTGTTACCTGGAGAAAAGGCCCAGAAGTTACTGCAGAAGGTGAAA GAAGTATTTAAAGCATCGCCTTTCCTTGTAGGGGATGACTGTGTTTCCATCATGAACGGAACAGATGAAGGCGTT TTGGGCGGAGGATCCACTCAGATCGCCTTCCTGCCACGCGTGGAGGGCACCCTGCAGGCCTCCCCACCCGGCTAC CTGACGGCACTGCGGATGTTTAACAGGACCTACAAGCTCTATTCCTACAGCTACCTCGGGCTCGGGCTGATGTCG TCTCCCAGTTTCAAAGGAGAGTGGGAACACGCAGAAGTCACGTACAGGGTTTCAGGGCAGAAAGCAGCGGCAAGC CTGCACGAGCTGTGTGCCGCCAGAGTGTCAGAGGTCCTTCAAAACAGAGTGCACAGGACGGAGGAAGTGAAGCAT GTGGACTTCTATGCTTTCTCCTACTATTACGACCTTGCAGCTGGTGTGGGCCTCATAGATGCGGAGAAGGGAGGC AGCCTGGTGGTGGGGGACTTCGAGATCGCAGCCAAGTACGTGTGTCGGACCCTGGAGACACAGCCGCAGAGCAGC CCCTTCTCATGCATGGACCTCACCTACGTCAGCCTGCTACTCCAGGAGTTCGGCTTTCCCAGGAGCAAAGTGCTG AAGCTCACTCGGAAAATTGACAATGTTGAGACCAGCTGGGCTCTGGGGGCCATTTTTCATTACATCGACTCCCTG $\mathtt{AACAGACAGAAGAGTCCAGCCTCA}$ \mathtt{TAG} $\mathtt{TGGCCGAGCCATCCCTGTCCCGTCAGCAGTGTCTGTGTGTCTGCATA$ **AACCCTCTGTCCTGGACGTGACTTCATCCTGAGGAGCCACAGCACAGGCCGTGCTGGCACTTTCTGCACACTGG** CTCTGGGACTTGCAGAAGGCCTGGTGCTGCCCTGGCATCAGCCTCTTCCAGTCACATCTGGCCAGAGGGCTGTCT GGACCTGGGCCCTGCTCAATGCCACCTGTCTGGCCTGGGCTCCAAGTGGGCAGGACCAGGACAGAACCACAGGCAC ACACTGAGGGGGCAGTGTGGCTCCCTGCCTGTCCCATCCCCATGCCCGTCCGCGGGGCTGTGGCTGCTGTG CATGTCCCTGCGATGGGAGTCTTGTCTCCCAGCCTGTCAGTTTCCTCCCCAGGGCAGAGCTCCCCTTCCTGCAAG AGTCTGGGAGGCGGTGCAGGCTGTCCTGGCTGCTCTGGGGAAGCCGAGGGACAGCCATAACACCCCCGGGACAGT AGGTCTGGGCGCACCACTGGGAACTCTGGACTTGAGTGTTTTGCTCTTCCTTGGGTATGAATGTGTGAGTTCA AGGTGCCCACCTTTCAGGGAGTCTCCCAGCATGGGCGGATGCCGGGCATGAGCTGCTGTAAACTATTTGTGGCTG TGCTGCTTGAGTGACGTCTCTGTCGTGTGGGTGCCAAGTGCTTGTGTAGAAACTGTGTTCTGAGCCCCCTTTTCT GGACACCAACTGTGTCCTGTGAATGTATCGCTACTGTGAGCTGTTCCCGCCTAGCCAGGGCCATGTCTTAGGTGC AGCTGTGCCACGGGTCAGCTGAGCCACAGTCCCAGAACCAAGCTCTCGGTGTCTCGGGCCACCATCCGCCCACCT CGGGCTGACCCCACCTCCATGGACAGTGTGAGCCCCGGGCCGTGCATCCTGCTCAGTGTGGCGTCAGTGTCG GGGCTGAGCCCCTTGAGCTGCTTCAGTGAATGTACAGTGCCCGGCACGAGCTGAACCTCATGTGTTCCACTCCCA

MKKGIRYETSRKTSYIFQQPQHGPWQTRMRKISNHGSLRVAKVAYPLGLCVGVFIYVAYIKWHRATATQAFFSIT RAAPGARWGQQAHSPLGTAADGHEVFYGIMFDAGSTGTRVHVFQFTRPPRETPTLTHETFKAVKPGLSAYADDVE KSAQGIRELLDVAKQDIPFDFWKATPLVLKATAGLRLLPGEKAQKLLQKVKEVFKASPFLVGDDCVSIMNGTDEG VSAWITINFLTGSLKTPGGSSVGMLDLGGGSTQIAFLPRVEGTLQASPPGYLTALRMFNRTYKLYSYSYLGLGLM SARLAILGGVEGQPAKDGKELVSPCLSPSFKGEWEHAEVTYRVSGQKAAASLHELCAARVSEVLQNRVHRTEEVK HVDFYAFSYYYDLAAGVGLIDAEKGGSLVVGDFEIAAKYVCRTLETQPQSSPFSCMDLTYVSLLLQEFGFPRSKV LKLTRKIDNVETSWALGAIFHYIDSLNRQKSPAS

6174/6881 FIGURE **5705A**

GAGCAGCTGCACCATCCCGGCGTTCGCGTGTGCCGCCGCTTTCCTCCATCTCTTTTCCTCCGCCTCCGCCGG CGCGATGGCGAAGCCGCTGACGGACAGCGAGAAGCGGAAGCAGATCAGCGTGCGCGGCCTGGCGGGGCTAGGCGA CGTGGCCGAGGTGCGGAAGAGCTTCAACCGGCACTTGCACTTCACGCTGGTCAAGGACCGCAATGTGGCCACGCC CTACTACGAGCGCGACCCCAAGCGCATTTATTATCTTTCCCTGGAATTCTACATGGGTCGCACGCTGCAGAACAC GATGGTGAACCTGGGCCTTCAGAATGCCTGCGATGAAGCCATCTATCAGTTGGGGTTAGACTTGGAGGAACTCGA GGAGATAGAAGAAGATGCTGGCCTTGGGAATGGAGGCCTGGGGAGGCTGGCAGCGTGTTTCCTTGACTCAATGGC TACCTTGGGCCTGGCAGCATACGGCTATGGAATCCGCTATGAATTTGGGATTTTTAACCAGAAGATTGTCAATGG CTGGCAGGTAGAGGAGGCCGATGACTGGCTGCGCTACGGCAACCCCTGGGAGAAAGCGCGGCCTGAGTATATGCT CATGCCCTACGACACCCCAGTGCCCGGCTACAAGAACACACGTCAACACCATGCGGCTGTGGTCCGCCAAGGC TCCCAACGACTTCAAGCTGCAGGACTTCAACGTGGGAGACTACATCGAGGCGGTCCTGGACCGGAACTTGGCTGA GAACATCTCCAGGGTCCTGTATCCAAATGATAACTTCTTTGAGGGGAAGGAGCTGCGGCTGAAGCAGGAGTACTT CGTGGTGGCCGCCACGCTCCAGGACATCATCCGCCGCTTCAAGTCGTCCAAGTTCGGCTGCCGGGACCCTGTGAG AACCTGTTTCGAGACGTTCCCAGACAAGGTGGCCATCCAGCTGAACGACACCCCACCCGCCCTCTCCATCCCTGA GCTCATGCGGATCCTGGTGGACGTGGAGAAGGTGGACTGGGACAAGGCCTGGGAAATCACGAAGAAGACCTGTGC ATACACCAACCACACTGTGCTGCCTGAGGCCTTGGAGCGCTGGCCCGTGTCCATGTTTGAGAAGCTGCTGCCGCG GCACCTGGAGATAATCTATGCCATCAACCAGCGGCACCTGGACCACGTGGCCGCGCTGTTTCCCGGCGATGTGGA GTCCCATGCTGTCAATGGTGTGGCGAGGATCCACTCGGAGATCGTGAAACAGTCGGTCTTTAAGGATTTTTATGA ACTGGAGCCAGAGAAGTTCCAGAATAAGACCAATGGCATCACCCCCCGCCGGTGGCTGCTGCTGTGCAACCCGGG GCTGGTCAGTGACGAGGTGTTCATCAGGGACGTGGCCAAGGTCAAACAGGAGAACAAGCTCAAGTTCTCGGCCTT CCTGGAGAAGGAGTACAAGGTGAAGATCAACCCCTCCTCCATGTTCGATGTGCATGTGAAGAGATCCACGAGTA CAAGCGGCAGCTGCTCAACTGCCTGCACGTCGTCACCCTGTACAATCGAATCAAGAGAGACCCGGCCAAGGCTTT TGTGCCCAGGACTGTTATGATTGGGGGCAAGGCAGCCCCGGTTACCACATGGCCAAGCTGATCATCAAGTTGGT CACCTCCATCGGCGACGTCGTCAATCATGACCCAGTTGTGGGTGACAGGTTGAAAGTGATCTTCCTGGAGAACTA CCGTGTGTCCTTGGCTGAGAAAGTGATCCCGGCCGCTGATCTGTCGCAGCAGATCTCCACTGCAGGCACCGAGGC CTCAGGCACAGGCAACATGAAGTTCATGCTCAACGGGGCCCTCACCATCGGCACCATGGACGGCGCCAACGTGGA GATGGCCGAGGAGGCCGGGGCCGAGAACCTCTTCATCTTCGGCCTGCGGGTGGAGGATGTCGAGGCCTTGGACCG GAAAGGGTACAATGCCAGGGAGTACTACGACCACCTGCCCGAGCTGAAGCAGGCCGTGGACCAGATCAGCAGTGG CTTTTTTTCTCCCAAGGAGCCAGACTGCTTCAAGGACATCGTGAACATGCTGATGCACCATGACAGGTTCAAGGT GTTTGCAGACTATGAAGCCTACATGCAGTGCCAGGCACAGGTGGACCAGCTGTACCGGAACCCCAAGGAGTGGAC CAAGAAGGTCATCAGGAACATCGCCTGCTCGGGCAAGTTCTCCAGTGACCGGACCATCACGGAGTATGCACGGGA CTGCTGGGCTCCCCAGAACTTTGCACACATCTTGCTATGTATTAGCCGATGTCTTTAGTGTTGAGCCTCTGGAT GGAAGGGCCAAGCCCCATGTAGCCCCAGTCATCCTGCCCAGCCCTGCCTCCTGGCCATGCCGGGAGGGGTCGGAT $\verb|CCTCTAGGCATCGCCTTCACAGCCCCCTGCCCCTGTCCTGTCCTGGCTCTGCACCTGGTATATGGGTCATGG|\\$ ACCCAGATGGGGCTTTCCCTTTGTAGCCATCCAATGGGCATTGTGTGGGTGCTTGGAACCCGGGATGACTGAGGG GGACACTGGAGTGGGTGCTTGTGTCTGCTGTCTCAGAGGCCTTGGTCAGGATGAAGTTGGCTGACACAGCTTAGC TTGGTTTTGCTTATTCAAAAGAGAAAATAACTACACATGGAAATGAAACTAGCTGAAGCCTTTTCTTGTTTTAGC AACTGAAAATTGTACTTGGTCACTTTTGTGCTTGAGGAGGCCCATTTTCTGCCTGGCAGGGGGCAGGTCTGTGCC CTTTCCACCAGTGCCACAGCCTCGTCTGGAAAAAGGACCAGGGGTCCCGGAGGAACCCATTTGTGCTCTGGT ACAGCAGGCCTGGCACTGGGAGGTGGGGGTGAGCCCCTCACAGCCTTGCCCCCCAAGGCTGGCAACCTGCCT CCCATTGCCCAAGAGAGAGGGCAGGGAACAGGCTACTGTCCTTCCCTGTGGAATTGCCGAGAAATCTAGCACCTT GCATGCTGGATCTGGGCTGCGGGGAGGCTCTTTTTCTCCCTGGCCTCCAGTGCCCACCAGGAGGATCTGCGCACG

6175/6881 FIGURE 5705B

GTGCACAGCCCACCAGAGCACTACAGCCTTTTATTGAGTGGGGCAAGTGCTGGGCTGTGGTCGTGCCCTGACAGC ATCTTCCCCAGGCAGCGGCTCTGTGGAGGAGGCCATACTCCCCTAGTTGGCCACTGGGGGCCACCACCCTGACCAC CACTGTGCCCCTCATTGTTACTGCCTTGTGAGATAAAAACTGATTAAACCTTTGTGGCTGTGGTTGGC

 ${\tt AGGCTACGGTTCGCGCCAGCGGCCGCGCT} \underline{{\tt ATC}} {\tt GGGCTGAGCCGCGTGCGGGCGGTTTTCTTTGACTTGGACAAC}$ ACTCTCATCGACACGGCCGGGCGAGCAGGAGAGGCATGTTGGAGGTGATAAAACTCTTACAATCAAAATACCAT TATAAAGAAGAGGCTGAAATCATCTGTGATAAAGTTCAAGTTAAACTCAGCAAGGAATGTTTTCATCCTTACAAT ACATGCATTACTGATTTAAGGACTTCACATTGGGAAGAAGCAATCCAGGAAACAAAAGGTGGTGCAGCCAATAGA AAATTGGCTGAAGAATGTTATTTCCTTTGGAAATCTACACGTTTACAGCATATGACACTAGCAGAAGACGTCAAA GCACCGTCCATATTTTATTACTGCTGCAATCTTCTCGGAGTACAACCTGGGGACTGTGATGGTCGGTGACACA TTAGAAACCGACATCCAAGGAGGCCTCAATGCAGGATTGAAAGCAACAGTCTGGATCAATAAAAATGGAATAGTG CCACTGAAGTCCTCCCCAGTTCCGCATTACATGGTTTCTTCTGTGCTAGAGTTACCTGCTCTTTACAAAGTATA ${\tt GACTGCAAAGTCAGTATGTCCACT} \underline{{\tt TAA}}{\tt AGCACATAAAAGGGCATGATTATGAATGTTAGAATCAATTTGCTGAGT$ ATGAAATAAGAAAAGTTAGGGCACTCCACTTATGATAATCCAGCTCTAAGAATAATTTTACTTATGATTTAATGG GAAAATTCAGATTGCATGAATTCAGGTCAGTAGTATAGCCCAGAAAATTTAAGGAAATTATTATTTGTTAGTCT GTATCTGGAGCTTTTTAAAATTATGTTATTAATCTTTTAGTATCTTGGCTGCATAATGCCAAGCAGGATTGCTTT ACACATGGATGCACAAATGTAAGGTTTATCTTCTGGCTTAAAAAATAGATATTTTTAAAAAAATAGATTTTCTAAAA CACAGATTTATGAAAGCAAGTGAATCTGGTTAATATGAAATAAGTACTAAGTCACATGCAAATCAAGGTATTATA GAACCTGATTTTTCTGTATGACATTTTTTTTTTTTCAGAGGGCAGGAGCAATTTTTCTATGGCATGTGACAGA TTCCTCCAGTTAGAAAAAGCTGTTAAAATCAACACATGGTGCTCCTTTACCGTGACATTTTCTCACCTGTGCACA GTGAGCCGGTAGCTTCCTTTTAGTCTTCACCTCTCAAGGAAATGTTTTTACTGTCTTTTCCCAGACACACAGTGG GGTTGAGGGAGCTAGGCTGTTTTGCTAGAGATAATTGCAAGGCACGTGGCACTAAAAGTCATTTTTCTTGTGG GGATCTCTGTCGCCCAGGTTGGAGTGCCATGGCACCATCTCGGCTCACTGCAACCTCTGCCTCCTGAGCTCAAGT GATCCTCCCACCTCAGCCTCCCAAGGGTGTGTGTGACTACAAGTACACACTACCACGCCCAGCTAATGTGTGTTT TTGTAGAGATGGGATTTTGCCATGTTGCCCAGGCTGGTCTCGAATTCCTGGATTCAAGTGATCCTCCCACCTCAG CCTCCTAAAGTCCTAGGATTATAGGCATGAGCCACTGTGCCTGGCCCCCTCATCTGATAGAAAATTAGATTTTGC TATGAGCCATTTCCTGAGGGCCAATTTAATACTCGTGTGACTCTTCTTAGAGTTACCATCTGCCTTAAATTTCCT CTGTTTTTCACATTCTTGGAAATATATCATTGTTTTGCAAATTTCTATATCTAATTCAGGGTTTACCAGGAGCTT AATAATTAATGGCTACATAGCAAGGCATCGTCTTGGAACCGGAGAATTTTCTCTAGACTATTAGGCTAGACAGTC TAATAAATATGA

MGLSRVRAVFFDLDNTLIDTAGASRRGMLEVIKLLQSKYHYKEEAEIICDKVQVKLSKECFHPYNTCITDLRTSH WEEAIQETKGGAANRKLAEECYFLWKSTRLQHMTLAEDVKAMLTELRKEVRLLLLTNGDRQTQREKIEACACQSY FDAVVVGGEQREEKPAPSIFYYCCNLLGVQPGDCVMVGDTLETDIQGGLNAGLKATVWINKNGIVPLKSSPVPHY MVSSVLELPALLQSIDCKVSMST

 $\tt CTTCCTGTTGCCTTAGGGGAACGTGGCTTTCCCTGCAGAGCCGGTGTCTCCGCCTGCGTCCCTGCAGCAACC$ ${\tt GGAGCTGGAGTCGGATCCCGAACGCACCCTCGCC} \underline{{\tt ATC}}{\tt GACTCGGCCCTCAGCGATCCGCATAACGGCAGTGCCGA}$ GGCAGGCGGCCCCACCAACAGCACTACGCGGCCGCCTTCCACGCCCGAGGGCATCGCGCTGGCCTACGGCAGCCT ${\tt CCTGCTCATGGCGCTGCTGCCCATCTTCTTCGGCGCCCTGCGCTCCGTACGCTGCGCCGCGGCAAGAATGCTTC}$ CTACCTCTTTTTCAAAATATTCTCCCAGGAGTACATCAACCTCCTGCTGTCCATGTATTTCTTCGTGCTGGGAAT GCTGCTCTTCACACAGGGTTCTGGGGAAAACAAGGAAGATCATCAATTATGAATTTGACACCAAGGACCTGGT GTGCCTGGGCCTGAGCAGCATCGTTGGCGTCTGGTACCTGCTGAGGAAGCACTGGATTGCCAACAACCTTTTTGG CCTGGCCTTCTCCCTTAATGGAGTAGAGCTCCTGCACCTCAACAATGTCAGCACTGGCTGCATCCTGCTGGGCGG ACTCTTCATCTACGATGTCTTCTGGGTATTTGGCACCAATGTGATGGTGACAGTGGCCAAGTCCTTCGAGGCACC AATAAAATTGGTGTTTCCCCAGGATCTGCTGGAGAAAGGCCTCGAAGCAAACAACTTTGCCATGCTGGGACTTGG AGATGTCGTCATTCCAGGGATCTTCATTGCCTTGCTGCTGCGCTTTGACATCAGCTTGAAGAAGAATACCCACAC CTACTTCTACACCAGCTTTGCAGCCTACATCTTCGGCCTGGGCCTTACCATCTTCATCATGCACATCTTCAAGCA TGCTCAGCCTGCCCTCCTATACCTGGTCCCCGCCTGCATCGGTTTTCCTGTCCTGGTGGCGCTGGCCAAGGGAGA AGTGACAGAGATGTTCAGCTACGAGTCCTCGGCGGAAATCCTGCCTCATACCCCGAGGCTCACCCCACTTCCCCAC GAATCCCAGCGCCATTTATGAGGAGTCAAATCCTAAGGATCCAGCGGCAGTGACAGAATCCAAAGAGGGAACAGA GGCATCAGCATCGAAGGGGCTGGAGAAGAAAGAGAAATGATGCAGCTGGTGCCCGAGCCTCTCAGGGCCAGACCA GACAGATGGGGGCTGGGCCCACACAGGCGTGCACCGGTAGAGGGCCACAGGAGGCCAAGGGCAGCTCCAGGACAGG CTCCTCCCCACACCCTGCAGGCAAAAGAAACCCCCAGCTTCCCCCCTCCCCGGGAGCCAGGTGGGAAAAGTGGGT TGTGCTCCTGGAA

MDSALSDPHNGSAEAGGPTNSTTRPPSTPEGIALAYGSLLLMALLPIFFGALRSVRCARGKNASDMPETITSRDA ARFPIIASCTLLGLYLFFKIFSQEYINLLLSMYFFVLGILALSHTISPFMNKFFPASFPNRQYQLLFTQGSGENK EEIINYEFDTKDLVCLGLSSIVGVWYLLRKHWIANNLFGLAFSLNGVELLHLNNVSTGCILLGGLFIYDVFWVFG TNVMVTVAKSFEAPIKLVFPQDLLEKGLEANNFAMLGLGDVVIPGIFIALLRFDISLKKNTHTYFYTSFAAYIF GLGLTIFIMHIFKHAQPALLYLVPACIGFPVLVALAKGEVTEMFSYEESNPKDPAAVTESKEGTEASASKGLEKK EK

GTTCCATTTTCCGTATCTGCTTCGGGCTTCCACCTCATTTTTTTCGCTTTGCCCATTCTGTTTCAGCCAGTCGCC AAGAATCATGAAAGTCGCCAGTGGCAGCACCGCCACCGCCGCGGGCCCCAGCTGCGCGCTGAAGGCCGGCAA GACAGCGAGCGTGCGGCGAGGTGGTGCGCTGTCTGTCTGAGCAGAGCGTGGCCATCTCGCGCTGCGCCGGGGG CTCACGCCTCAAGGAGCTGGTGCCCACCCTGCCCCAGAACCGCAAGGTGAGCAAGGTGGAGATTCTCCAGCACGT ${\tt CATCGACTACATCAGGGACCTTCAGTTGGAGCTGAACTCGGAATCCGAAGTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGAAGTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGAAGTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGAAGTTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGAAGTTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGAAGTTTGGAACCCCCGGGGGCCGAGGGCTTGAACTCGGAATCCGGAATCCGGAAGTTTGGAACCCCCGGGGGCCCGAGGGCCTGAACTCGGAATCCGGAATCCGGAATCCGGAACTCGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGAACTCGGAACTCGGAACTCGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGGAACTCGAACTCGGAACTCGAACTCGGAACTCGGAACTCGAACTCGGAACTCAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCGAACTCAACT$ GCCGGTCCGGGCTCCGCTCAGCACCCTCAACGGCGAGATCAGCGCCCTGACGGCCGAGGTGAGATCCAGATCCGA CCACTAGATCATCCTTATACCGACGGGGAAACGGAGGCCAGAGAGGGCGTGGGCGCTTGCACCACTTCCGTCCCA TCCTTGCGGGTACCTGGCTATGCGGGGGTGCCTAAGGAGCCTGGAAAAAGCGCTCCCCGTCGTGCTTCCTGGGG GCATGCGTTCCTGCGGACGATCGCATCTTGTGTCGCTGAAGCGCCTCCCCCAGGGACCGGCGGACCCCAGCCATC CAGGGGGCAAGAGGAATTACGTGCTCTGTGGGTCTCCCCCAACGCGCCTCGCCGGATCTGAGGGAGAACAAGACC GATCGGCGGCCACTGCGCCCTTAACTGCATCCAGCCTGGGGGCTGAGGCACTGGCGAGGAGAGAGGGCGCTC CTCTCTGCACACCTACTAGTCACCAGAGACTTTAGGGGGTGGGATTCCACTCGTGTTTTCTATTTTTTGAAAAG CAGACATTTTAAAAAATGGTCACGTTTGGTGCTTCTCAGATTTCTGAGGAAATTGCTTTGTATTGTATATTACAA TGGTG

 ${\tt MKVASGSTATAAAGPSCALKAGKTASGAGEVVRCLSEQSVAISRCAGGAGARLPALLDEQQVNVLLYDMNGCYSRLKELVPTLPQNRKVSKVEILQHVIDYIRDLQLELNSESEVGTPGGRGLPVRAPLSTLNGEISALTAEAACVPADDRILCR$

PCT/US2003/028547

6183/6881 FIGURE 5713

GGAGGAGGAAGCAAGCGAGGGGGCTGGTTCCTGAGCTTCGCAATTCCTGTGTCGCCTTCTGGGCTCCCAGCCTGC CCGCAGCCACCTCCCCGACCTGTGATACAAAAGATCTTCCGGGGGCTGCACCTGCCTTTGCCTAAGG CGGATTTGAATCTCTTCTCCCTTCAGAATCTTATCTTGGCTTTGGATCTTAGAAGAGAATCACTAACCAGAG ACGAGACTCAGTGAGTGAGCAGGTGTTTTGGACAATGGACTGGTTGAGCCCCATCCCTATTATAAAAAATG AGCAACCGGGAGCTGGTGGTTGACTTTCTCTCCTACAAGCTTTCCCAGAAAGGATACAGCTGGAGTCAGTTTAGT GATGTGGAAGAGACAGGACTGAGGCCCCAGAAGGGACTGAATCGGAGATGGAGACCCCCAGTGCCATCAATGGC AACCCATCCTGGCACCTGGCAGACAGCCCCGCGGTGAATGGAGCCACTGGCCACAGCAGCAGTTTGGATGCCCGG GCATTCAGTGACCTGACATCCCAGCTCCACATCACCCCAGGGACAGCATATCAGAGCTTTGAACAGGTAGTGAAT GAACTCTTCCGGGATGGGGTAAACTGGGGTCGCATTGTGGCCTTTTTCTCCTTCGGCGGGGCACTGTGCGTGGAA AGCGTAGACAAGGAGATGCAGGTATTGGTGAGTCGGATCGCAGCTTGGATGGCCACTTACCTGAATGACCACCTA GAGCCTTGGATCCAGGAGAACGGCGGCTGGGATACTTTTGTGGAACTCTATGGGAACAATGCAGCAGCCGAGAGC CGAAAGGGCCAGGAACGCTTCAACCGCTGGTTCCTGACGGGCATGACTGTGGCCGGCGTGGTTCTGCTGGGCTCA CTCTTCAGTCGGAAATGACCAGACACTGACCATCCACTCTACCCTCCCACCCCTTCTCTGCTCCACCACACATCCT CCGTCCAGCCGCCATTGCCACCAGGAGAACCACTACATGCAGCCCATGCCCACCTGCCCATCACAGGGTTGGGCC CAGATCTGGTCCCTTGCAGCTAGTTTTCTAGAATTTATCACACTTCTGTGAGACCCCCACACCTCAGTTCCCTTG GCCTCAGAATTCACAAAATTTCCACAAAATCTGTCCAAAGGAGGCTGGCAGGTATGGAAGGGTTTGTGGCTGGGG GCAGGAGGCCCTACCTGATTGGTGCAACCCTTACCCCTTAGCCTCCTGAAAATGTTTTTCTGCCAGGGAGCTT GAAAGTTTTCAGAACCTCTTCCCCAGAAAGGAGACTAGATTGCCTTTGTTTTGATGTTTTGTGGCCTCAGAATTGA AGGGGGCTATAGCTACAGGAAGCACCCCATGCCAAAGCTAGGGTGGCCCTTGCAGTTCAGCACCACCCTAGTCCC TTCCCCTCCCTGGCTCCCATGACCATACTGAGGGACCAACTGGGCCCAAGACAGATGCCCCAGAGCTGTTTATGG CCTCAGCTGCCTCACTTCCTACAAGAGCAGCCTGTGGCATCTTTGCCTTGGGCTGCTCCTCATGGTGGGTTCAGG GGACTCAGCCCTGAGGTGAAAGGGAGCTATCAGGAACAGCTATGGGAGCCCCAGGGTCTTCCCTACCTCAGGCAG AGATCTGTGCCCCATGCCTGTCCAGCCTGGGCAGCCAGGCTGCCAAGGCCAGAGTGGCCTGGCCAGGAGCTCTTC AGGCCTCCCTCTCTCTCTCCCACCCTTGGCCTGTCTCATCCCCAGGGGTCCCAGCCACCCCGGGCTCTCTGC TGTACATATTTGAGACTAGTTTTTATTCCTTGTGAAGATGATATACTATTTTTGTTAAGCGTGTCTGTATTTATG TGTGAGGAGCTGCTGGCTTGCAGTGCGCGTGCACGTGGAGAGCTGGTGCCCGGAGATTGGACGGCCTGATGCTCC CTCCCCTGCCCTGGTCCAGGGAAGCTGGCCGAGGGTCCTGGCTCCTGAGGGGCATCTGCCCCTCCCCCAACCCCC ACCCCACACTTGTTCCAGCTCTTTGAAATAGTCTGTGTGAAGGTGAAAGTGCAGTTCAGTAATAAACTGTGTTTA CTCAGTGAAAAAAAAAAAAAAAAAA

MSQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAINGNPSWHLADSPAVNGATGHSSSL DAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVNWGRIVAFFSFGGAL CVESVDKEMQVLVSRIAAWMATYLNDHLEPWIQENGGWDTFVELYGNNAAAESRKGQERFNRWFLTGMTVAGVVL LGSLFSRK

GGGAGCAGCTAGGGCGCGGGTCTCCCTCCCCGGAGTTTGGAACGGCTGAAGTTCACCTTCCAGCCCCTAGCGC CGTTCGCGCCGCTAGGCCTGGCTTCTGAGGCGGTTGCGGTGCTCGGTCGCCCCTAGGCGGGGCAGGGTGCGAGC TTGCGGGAGGCTGTCGGCTAATAACGGTTCTTGATACATATTTGCCAGACTTCAAGATTTCAGAAAAAGGGGTGAA AGAGAAGATTGCAACTTTGAGTCAGACCTGTAGGCCTGATAGACTGATTAAACCACAGAAGGTGACCTGCTGAGA AAAGTGGTACAAATACTGGGAAAAACCTGCTCTTCTGCGTTAAGTGGGAGACA<u>A**TG**</u>TCACAAGTTAAAAGCTCTT ATTCCTATGATGCCCCCTCGGATTTCATCAATTTTTCATCCTTGGATGATGAAGGAGATACTCAAAACATAGATT CATGGTTTGAGGAGAAGGCCAATTTGGAGAATAAGTTACTGGGGAAGAATGGAACTGGAGGGCTTTTTCAGGGCA AAACTCCTTTGAGAAAGGCTAATCTTCAGCAAGCTATTGTCACACCTTTGAAACCAGTTGACAACACTTACTACA AAGAGGCAGAAAAAAAAATCTTGTGGAACAATCCATTCCGTCAAATGCTTGTTCTTCCCTGGAAGTTGAGGCAG CCATATCAAGAAAAACTCCAGCCCAGCCTCAGAGAAGATCTCTTAGGCTTTCTGCTCAGAAGGATTTGGAACAGA AAGAAAAGCATCATGTAAAAATGAAAGCCAAGAGATGTGCCACTCCTGTAATCATCGATGAAAATTCTACCCTCTA AGAAAATGAAAGTTTCTAACAACAAAAAGAAGCCAGAGGAAGAAGGCAGTGCTCATCAAGATACTGCTGAAAAGA ATGCATCTTCCCCAGAGAAAGCCAAGGGTAGACATACTGTGCCTTGTATGCCACCTGCAAAGCAGAAGTTTCTAA AAAGTACTGAGGAGCAAGAGCTGGAGAAGAGTATGAAAATGCAGCAAGAGGTGGTGGAGATGCGGAAAAAGAATG AAGAATTCAAGAAACTTGCTCTGGCTGGAATAGGGCAACCTGTGAAGAAATCAGTGAGCCAGGTCACCAAATCAG TTGACTTCCACTTCCGCACAGATGAGCGAATCAAACAACATCCTAAGAACCAGGAGGAATATAAGGAAGTGAACT TTACATCTGAACTACGAAAGCATCCTTCATCTCCTGCCCGAGTGACTAAGGGATGTACCATTGTTAAGCCTTTCA ACCTGTCCCAAGGAAAGAAAGAACATTTGATGAAACAGTTTCTACATATGTGCCCCTTGCACAGCAAGTTGAAG ACTTCCATAAACGAACCCCTAACAGATATCATTTGAGGAGCAAGAAGGATGATATTAACCTGTTACCCTCCAAAT CTTCTGTGACCAAGATTTGCAGAGACCCACAGACTCCTGTACTGCAAACCAAACACCGTGCACGGGCTGTGACCT GCAAAAGTACAGCAGAGCTGGAGGCTGAGGAGCTCGAGAAATTGCAACAATACAAATTCAAAGCACGTGAACTTG TTGATTTGGAAATTGAGAAAAGAATCCAGGAGCGAGAATCAAAGAAGAAAACAGAGGATGAACACTTTGAATTTC ATTCCAGACCTTGCCCTACTAAGATTTTGGAAGATGTTGTGGGTGTTCCTGAAAAGAAGGTACTTCCAATCACCG TCCCCAAGTCACCAGCCTTTGCATTGAAGAACAGAATTCGAATGCCCACCAAAGAAGATGAGGAAGAGAGACGAAC CGGTAGTGATAAAAGCTCAACCTGTGCCACATTATGGGGTGCCTTTTAAGCCCCAAATCCCAGAGGCAAGAACTG TGGAAATATGCCCTTTCTCGTTTGATTCTCGAGACAAAGAACGTCAGTTACAGAAGGAGAAGAAAATAAAAGAAC TGCAGAAAGGGGAGGTGCCCAAGTTCAAGGCACTTCCCTTGCCTCATTTTGACACCATTAACCTGCCAGAGAAGA AGGTAAAGAATGTGACCCAGATTGAACCTTTCTGCTTGGAGACTGACAGAAGAGGTGCTCTGAAGGCACAGACTT TCTCTCAGGAGCCCTTTGTTCCCAAGAAAGAGAAAATCAGTTGCTGAGGGCCTTTCTGGTTCTAGTTCAGG AACCTTTTCAGCTGGCTACTGAGAAGAGAGCCAAAGAGCGGCAGGAGCTGGAGAAGAGAATGGCTGAGGTAGAAG CCCAGAAAGCCCAGCAGTTGGAGGAGGCCAGACTACAGGAGGAAGAGCAGAAAAAAAGAGGAGCTGGCCAGGCTAC GGAGAGAACTGGTGCATAAGGCAAATCCAATACGCAAGTACCAGGGTCTGGAGATAAAGTCAAGTGACCAGCCTC TGACTGTGCCTGTATCTCCCAAATTCTCCACTCGATTCCACTGC<u>TAA</u>ACTCAGCTGTGAGCTGCGGATACCGCCC GGCAATGGGACCTGCTCTAACCTCAAACCTAGGACCGTCTTGCTTTGTCATTGGGCATGGAGAGAACCCATTTC TCCAGACTTTTACCTACCCGTGCCTGAGAAAGCATACTTGACAACTGTGGACTCCAGTTTTGTTGAGAATTGTTT TCTTACATTACTAAGGCTAATAATGAGATGTAACTCATGAATGTCTCGATTAGACTCCATGTAGTTACTTCCTTT AAACCATCAGCCGGCCTTTTATATGGGTCTTCACTCTGACTAGAATTTAGTCTCTGTGTCAGCACAGTGTAATCT CTATTGCTATTGCCCCTTACGACTCTCACCCTCTCCCCACTTTTTTTAAAAATTTTAACCAGAAAATAAAGATAG TTAAATCCTAAGATAGAGATTAAGTCATGGTTTAAATGAGGAACAATCAGTAAATCAGATTCTGTCCTCTTCTCT GCATACCGTGAATTTATAGTTAAGGATCCCTTTGCTGTGAGGGTAGAAAACCTCACCAACTGCACCAGTGAGGAA

MSQVKSSYSYDAPSDFINFSSLDDEGDTQNIDSWFEEKANLENKLLGKNGTGGLFQGKTPLRKANLQQAIVTPLK
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IDEILPSKKMKVSNNKKKPEEEGSAHQDTAEKNASSPEKAKGRHTVPCMPPAKQKFLKSTEEQELEKSMKMQQEV
VEMRKKNEEFKKLALAGIGQPVKKSVSQVTKSVDFHFRTDERIKQHPKNQEEYKEVNFTSELRKHPSSPARVTKG
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QIPEARTVEICPFSFDSRDKERQLQKEKKIKELQKGEVPKFKALPLPHFDTINLPEKKVKNVTQIEPFCLETDRR
GALKAQTWKHQLEEELRQQKEAACFKARPNTVISQEPFVPKKEKKSVAEGLSGSLVQEPFQLATEKRAKERQELE
KRMAEVEAQKAQQLEEARLQEEEQKKEELARLRRELVHKANPIRKYQGLEIKSSDQPLTVPVSPKFSTRFHC

GGCAGGCTATTCCGGACGCCAGCCCTGGAAGCTGAGCCTGACCCAGCAGGTCCCAGCAGCCTGGCAGCCCGGCCA CCCTTATTGCTATGGCCATCCAGAGCTCACCGGGGCAGCGGGCCACCCTCAGTGGCATCTACCGCTACATCATGG GCCGATTCGCCTTCTACCGCCACAACCGGCCCGGCTGGCAGAACAGCATCCGCCACAACCTGTCACTCAACGAGT GCTTTGTCAAGGTGCCCCGCGATGACCGCAAGCCAGGCAAGGGCAGCTACTGGACGCTGGACCCTGACTGCCACG ACATGTTTGAGCACGGCAGCTTCCTACGCCGCCGCCGCCGCTTCACCCGGCAGACAGGTGCTGAGGGCACCCGGG GCCCGCCAAGGCACGCCGTGGACCCTCAGGGCGACCAGGCCAGGACCCAGGAGTCCCCAACGCCACGACCGGCA GGCAGTGCTCATTCCCACCAGAGCTGCCAGATCCCAAGGGCCTAAGCTTTGGGGGGTCTGGTGGGGGGCCATGCCAG $\tt CTGCATGCCCAGGGGAGCTCCCCGTGGCCACCTCATCTTCCTCATGCCCAGCGTTTGGCTTTCCTGCCGGCTTCT$ CAGAGGCTGAGAGTTTTAATAAGGCCCCTACGCCCGTCTTGTCCCCGGAATCAGGCATCGGGAGCAGCTACCAGT GTCGGCTGCAGGCACTGAATTTTTGCATGGGGGCTGACCCAGGCCTTGAGCACCTCTTGGCCTCAGCAGCCCCCT CCCCTGCACCACCCCCCCCAGGCTCACTCCGGGCCCCACTGCCCTGCCAACTGACCACAAGGAACCCTGGG TTGCAGGTGGCTTCCCTGTCCAGGGAGGCTCCGGCTACCCATTGGGGCTGACCCCCTGCCTATACCGGACGCCAG ${\tt GAATGTTCTTTTGAG}$ GGCTCTAGGACCTGAAGAACTCTCGAAGGACCCAGCCCTGGTGAGCCAAGGACAACCACAGAAAGCCAGGATT ${\tt GAAGCGGTGCTCAGCCAGGCCCCTGGGGCCTCCGGACAAACTTGGGGGTGAGGGGAAGCAGGGCCTCTTGGGATT}$ TACTCTGTGGCTCTCAGGGCCAATAAAGCCATGTGATGATG

 $\label{thm:possign} $$ MQQQPLPGPGAPTTEPTKPPYSYIALIAMAIQSSPGQRATLSGIYRYIMGRFAFYRHNRPGWQNSIRHNLSLNEC FVKVPRDDRKPGKGSYWTLDPDCHDMFEHGSFLRRRRFTRQTGAEGTRGPAKARRGPLRATSQDPGVPNATTGR QCSFPPELPDPKGLSFGGLVGAMPASMCPATTDGRPRPPMEPKEISTPKPACPGELPVATSSSSCPAFGFPAGFS EAESFNKAPTPVLSPESGIGSSYQCRLQALNFCMGADPGLEHLLASAAPSPAPPTPPGSLRAPLPLPTDHKEPWV AGGFPVQGGSGYPLGLTPCLYRTPGMFFFE$

GGCACGAGGATCCCGGGGTCGCGCGAGAGCCGCAAGCGGAGTTGGTGGGCGCTATCCTATCACCCGAGGCAGAGC GAGTGCTGCGGTACCTTGTAGAAGTGGAGGAGCTCGCCGAGGAGGTGCTGGCGGACAAGCGGCAGATTGTGGACC TGGACACTAAAAGGAATCAGAATCGAGAGGGCCCTGAGGGCCCTGCAGAAGGATCTCAGCCTCTCTGAAGATGTGA TGGTTTGCTTCGGGAACATGTTTATCAAGATGCCTCACCCTGAGACAAAGGAAATGATTGAAAAAAGATCAAGATC ATCTGGATAAAGAAATAGAAAAACTGCGGAAGCAACTTAAAGTGAAGGTCAACCGCCTTTTTGAGGCCCAAGGCA AACCGGAGCTGAAGGGTTTTAACTTGAACCCCCTCAACCAGGATGAGCTTAAAGCTCTCAAGGTCATCTTGAAAG GA<u>TGA</u>GACTCAAGAACCAAGATGGGGGACCAGCAACCCCCCAGGGTCATGGAGGACCCAGGACCCTCCAACCTTG ACACCTGTAAGGACAGGATCTGCCCTGTAAGGGGCCCAGCCGTCAGGAATCTGGCCATGAAAACCTCTTTGTAGTG ACACAAGATCTATTGACGGGCCTTGGTAGCCACCAGTGGGTGTGTGGGGGCAGTGGCTGTGGGGGGTGTAAGAATGA AGTGGAGTGTCATTCCAGCATTCCTCTCAGAAGGGAGAGAGGTTTTCAGGCTGGTGCCATGCGATTGGAATAAAG CAGGAGGCTCATGGGTGGTTGCTGAATGAAGAACAGAATCTTGGTGCTTTGTGGCTCACCACAGCCATCTGTGGG GCAGGCACACACCTCCCGCCAGCTCCAATTTTGCACTTTTTCCCTGCTTGATTCCAAGAGTAGGTGCTGCCTA GCAGCCCTTCGTGGCCACTCTTTACTCAGGAGGGCCTTGCAGAGTCCTGCACCAGGCCTGGGTGAGTGGATGCGC CTCTTACCATATGACACGTGTCAAGATGCCCTTCCGCCCCCTCTGAAAGTGGGGCCCGGCCAGCACTGCTCGTTA $\tt CTGTCTGCCTTCAGTGGTCTGAGGTCCCAGTATGAACTGCCGTGAAGTCAAAACTCTTATGTGTTCATTAAGGGC$

 ${\tt MLSPEAERVLRYLVEVEELAEEVLADKRQIVDLDTKRNQNREGLRALQKDLSLSEDVMVCFGNMFIKMPHPETKE}\\ {\tt MIEKDQDHLDKEIEKLRKQLKVKVNRLFEAQGKPELKGFNLNPLNQDELKALKVILKG}$

6191/6881 FIGURE **5721A**

CCAAGATGGCGACGGCGATGGTGAAGGAGGACTCCGGGGAGCGGGAGCTGGAGCGGGGCCCTCCGGGGTATCC ${\tt CAGGATCTTCCAGCACCCCATGCCTGGGCCCTGAGCCACCTCCGGGACCCCTGACTCAGGCCTGAGGGCTACCTCT}$ GACTGGGCTTGTCTTCCCCGAAATCCACCTCCCTGGCCCTGCCCCTGCACTCAGGCTTGTGAAGGCCCCGAGTTT $\tt CGCGCCTATCAACTTCCACCAGAACGATCCCGTAGAAATCAAGGCTGTGAAGCTCACCAGCTCTCGAACCCAGCT$ ACCTTATGAATACTATTCACTGCCCTTCTGCCAGCCCAGCAAGATAACCTACAAGGCAGAGAATCTGGGAGAGGT GCTGAGAGGGGACCGGATTGTCAACACCCCTTTCCAGGTTCTCATGAACAGCGAGAAGAAGTGTGAAGTTCTGTG CAGCCAGTCCAACAAGCCAGTGACCCTGACAGTGGAGCAGAGCCGACTCGTGGCCGAGCGGATCACAGAAGACTA CTACGTCCACCTCATTGCTGACAACCTGCCTGTGGCCACCCGGCTGGAGCTCTACTCCAACCGAGACAGCGATGA CAAGAAGAAGAAAAAGATGTGCAGTTTGAACACGGCTACCGGCTCGGCTTCACAGATGTCAACAAGATCTACCT GCACAACCACCTCTCATTCATCCTTTACTATCATCGGGAGGACATGGAAGAGGACCAGGAGCACACGTACCGTGT CGTCCGCTTCGAGGTGATTCCCCAGAGCATCAGGCTGGAGGACCTCAAAGCAGATGAGAAGAGTTCGTGCACTCT GCCTGAGGGTACCAACTCCTCGCCCCAAGAAATTGACCCCACCAAGGAGAATCAGCTGTACTTCACCTACTCTGT CCACTGGGAGGAAAGTGATATCAAATGGGCCTCTCGCTGGGACACTTACCTGACCATGAGTGACGTCCAGATCCA CTGGTTTTCTATCATTAACTCCGTTGTTGTGGTCTTCTTCCTGTCAGGTATCCTGAGCATGATTATCATTCGGAC CCTCCGGAAGGACATTGCCAACTACAACAAGGAGGATGACATTGAAGACACCATGGAGGAGTCTGGGTGGAAGTT GGTGCACGGCGACGTCTTCAGGCCCCCCAGTACCCCATGATCCTCAGCTCCCTGCTGGGCTCAGGCATTCAGCT GTTCTGTATGATCCTCATCGTCATCTTTGTAGCCATGCTTGGGATGCTGTCGCCCTCCAGCCGGGGAGCTCTCAT GACCACAGCCTGCTTCCTCTTCATGTTCATGGGGGTGTTTGGCGGATTTTCTGCTGGCCGTCTGTACCGCACTTT AAAAGGCCATCGGTGGAAGAAAGGAGCCTTCTGTACGGCAACTCTGTACCCTGGTGTGGTTTTTTGGCATCTGCTT CGTATTGAATTGCTTCATTTGGGGAAAGCACTCATCAGGAGCGGTGCCCTTTCCCACCATGGTGGCTCTGCTGTG CATGTGGTTCGGGATCTCCCTGCCCCTCGTCTACTTGGGCTACTACTTCGGCTTCCGAAAGCAGCCATATGACAA CCCTGTGCGCACCAACCAGATTCCCCGGCAGATCCCCGAGCAGCGGTGGTACATGAACCGATTTGTGGGCATCCT CATGGCTGGGATCTTGCCCTTCGGCGCCATGTTCATCGAGCTCTTCTTCATCTTCAGTGCTATCTGGGAGAATCA GTTCTATTACCTCTTTGGCTTCCTGTTCCTTGTTTTCATCATCCTGGTGGTATCCTGTTCACAAATCAGCATCGT CATGGTGTACTTCCAGCTGTGCAGAGGATTACCGCTGGTGGTGGAGAAATTTCCTAGTCTCCGGGGGCTCTGC ATTCTACGTCCTGGTTTATGCCATCTTTTATTTCGTTAACAAGCTGGACATCGTGGAGTTCATCCCCTCTCTCCT CTACTTTGGCTACACGGCCCTCATGGTCTTGTCCTTCTGGCTGCTAACGGGTACCATCGGCTTCTATGCAGCCTA ${\tt CATGTTTGTTCGCAAGATCTATGCTGCTGTGAAGATAGAC} {\tt TGA} {\tt TTGGAGTGGACCACGGCCAAGCCTGCTCCGTC}$ CTCGGACAGGAAGCCACCCTGCGTGGGGGACTGCAGGCACGCAAAATAAAATAACTCCTGCTCGTTTGGAATGTA GTCATCTTATTCCAGTTCTGTGGGGATGAGTTTTTTTTGTGGGTTGCTTTTTCTTCAGTGCTAAGAAAGTTCCCT AATGGATCCAGGATGGATAAATCCACCGAGATAAGGGTTTTGGTCACTGTCTCCACCTCAGTTCCTCAGGGCTGT TGGCCACCCTATGACTAACTGGAAGAGGACACGCCAGAGCTTCAGTGAGGTTTCCGAGCCTCTCCCTGCCCATCC TTTCACCAGGAGCAAACCCAAGTCTTAGTTGCTACAAGAAAATCCCCTGGAAGTACTGGGGGCCAGGTTCCCCAG AACTGTTTTTGTGCCAAGAAACCCTGGACCTGGGGCCAAGTATTTCCCAAGCCAAGCATCCACTTGTCTGTGTCT GGGAAGGGATGGCCAAGGCCGCTAGGGTCCTTACCCCTCAGGATCACTCCCCAGCCCTTTCCTCAGGAGGTACCG $\verb|CTCTCCAAGGTGTGCTAGCAGTGGGCCCTGCCCAACTTCAGGCAGAACAGGGGGGGCCCAGAGATTACAGATCCCC| \\$ ACGTGGCTGGCCTCCGTAGACCCCTGTTCTTTCAACCTCTGCCCACCCGTGCATGTCATCACAAACA TTTGCTCTTAAGTTACAAGAGACCACCACCCAGGGATTAGGGTTCAAGTAGCAGCTGCTAACCCTTGCACCA

6192/6881 FIGURE 5721B

PCT/US2003/028547

6193/6881 FIGURE 5722

MCETSAFYVPGVAPINFHQNDPVEIKAVKLTSSRTQLPYEYYSLPFCQPSKITYKAENLGEVLRGDRIVNTPFQV
LMNSEKKCEVLCSQSNKPVTLTVEQSRLVAERITEDYYVHLIADNLPVATRLELYSNRDSDDKKKEKDVQFEHGY
RLGFTDVNKIYLHNHLSFILYYHREDMEEDQEHTYRVVRFEVIPQSIRLEDLKADEKSSCTLPEGTNSSPQEIDP
TKENQLYFTYSVHWEESDIKWASRWDTYLTMSDVQIHWFSIINSVVVVFFLSGILSMIIIRTLRKDIANYNKEDD
IEDTMEESGWKLVHGDVFRPPQYPMILSSLLGSGIQLFCMILIVIFVAMLGMLSPSSRGALMTTACFLFMFMGVF
GGFSAGRLYRTLKGHRWKKGAFCTATLYPGVVFGICFVLNCFIWGKHSSGAVPFPTMVALLCMWFGISLPLVYLG
YYFGFRKQPYDNPVRTNQIPRQIPEQRWYMNRFVGILMAGILPFGAMFIELFFIFSAIWENQFYYLFGFLFLVFI
ILVVSCSQISIVMVYFQLCAEDYRWWWRNFLVSGGSAFYVLVYAIFYFVNKLDIVEFIPSLLYFGYTALMVLSFW
LLTGTIGFYAAYMFVRKIYAAVKID

6194/6881 FIGURE 5723A

ATGGCCCGACCGCCACTACCGGGGCCTGAGGGGCCCTGGCGGAGCCCGAGCGCGGCCCGCCAGCGTGG GGCCCCGAGCGCGGTGAAGAGATTGTTTTCTGAAAGCTGCGTTGGAGGCTGTGACAGAGCTGAGAGCCTGTGTGG AGCGGATGGGGAGGCTTTCTCAATAACATGGCCCTTTGCCATTAGCCTTGCCATGCCATGACCACATTTTTCACCAGCGTCCCCCCTGGATTCAAGATGCAAAGCAGGAGGAGGAGGTGGGCTGGAAACTAGTTCCCAGGCCTCGGGGCCGGGA GGCGGAGAGTCAAGTGAAGTGCCAATGTGAAATTTCGGGAACACCTTTCTCAAATGGGGAGAAGCTGAGGCCTCA CAGCCTCCCGCAACCAGAGCAGAGCCATATAGCTGCCCTCAGCTGCACTGTGGCAAGGCTTTTGCTTCCAAATA $\tt CCGCAAGGACCATCTGCGGAACCATCTGCAGACCCATGATCCTAACAAAGAGGCCCTCCACTGCTCTGAGTGCGG$ ${\tt CAAGGTGTGCCTGCAGACCTTTGAGAGTACCCAGGCCCTGCTAGAGGCACCTGAAGGCCCACTCACGCCGGGTAGCCCTGCAGAGGCCCACTCACGCCGGGTAGCCCTGCAGAGGCCCCACTCACGCCGGGTAGCCCTGCAGAGGCCCCACTCACGCCGGGTAGCCCAGGCCCTGCAGAGGCCCCACTCACGCCGGGTAGCCCAGGCCCCTGCAGAGGCCCCACTCACGCCGGGTAGCCCAGGCCCCTGCTAGAGGCCCCACTCACGCCCGGGTAGCCCAGGCCCCTGCAGAGGCCCCACTCACGCCCGGGTAGCCACTCACGCCCGGGTAGCCCAGGCCCCTGCAGAGGCCCCACTCACGCCCGGGTAGCCCAGGCCCAGGCCCAGGCCCCAGGCCCCAGGCCCAGGCCCCAGGCCAGGCCAGGCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCAGGCCAGGCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCAGGCCAGGCCCAGGCCCAGGCCCAGGCCCAGGCCAGGCCAGGCCCAGGCCAGGCCCAGGCCCAGGCCCAGGCCAGGCCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCCAGGCAGGCCCAGGCCAGGCCAGGCCAGGCAGGCCAGGCCAGGCCAGGCCCAGGCCAGGCCCAGGCCAGGCCCAGGCCCAGGCCCAGGCCCAGGC$ AGGCGGTGCCAAGGAGAAGAAGCACCCCTGTGACCACTGCGACCGGCGGTTCTATACTCGTAAGGATGTACGGCG GCACCTAGTGGTGCACACAGGCCGTAAGGACTTCCTGTGCCAGTACTGTGCCCAGCGGTTTGGCCGTAAGGACCA CCTGACGCGTCATGTCAAGAAGAGCCACTCGCAGGAGCTGCTCAAGATCAAGACAGAGCCCGTGGACATGTTAGG $\tt CCTACTCAGCTGCAGCTCCACAGTCAGTGTGAAGGAAGAGCTGAGCCCTGTGCTGTGCATGGCCTCTCGGGACGT$ AATGGGGACCAAGGCCTTCCCTGGCATGTTGCCCATGGGCATGTATGGTGCCCACATCCCTACCATGCCCAGCAC GGGCGTGCCACACTCCCTGGTGCACAACACGCTGCCCATGGGTATGAGCTACCCTCTGGAATCCTCACCTATCTC TTCCCCAGCTCAGCTCCCTCCAAAATACCAGCTTGGATCTACCTCATACTTGCCCGACAAATTGCCCAAAGTGGA GCCGGCGGCAGCTGCGGCCCTCCTAGATGAAGCACTGCTTGCCAAGAGCCCCGCCAACCTCTCTGAGGCCCTCTG CGCTGCTAATGTGGACTTCTCCCACCTACTGGGCTTTCTTCCACTCAACCTGCCCCGTGTAACCCACCTGGGGC CACAGGAGGCCTGGTCATGGGCTACTCCCAGGCTGAGGCACAGCCCCTGCTTACCACTTTGCAAGCTCAGCCTCA AGATTCCCCAGGAGCTGGGGGACCACTGAACTTTGGGCCTCTGCACTCCTTGCCTCCTGTCTTCACGTCTGGCCT ${ t GAGTAGCACCCTGCCTCGTTTCCATCAAGCATTCCAG}$ TCTGTTATGGAGCCTTAGTACCCACCCCGTCTGTGTCCCCCATGAAGGCAGCTGAGCTTTCAGAGCTGGGTTCAA AAAAAAAATTCCAGTGTCTGTATACAGGAGCACTTGGTTTGGGGGGTTCAGGCTCTAGGATCGATTCCAGAAGGA GCCTTGAGCCCCAACCCCGTGAAAAGATCTCATACCGTAGGACTTCAGGTATTATTTTACTTTTATTTTTTGACC TGAATCGGGAGCCACACTTGGCCCTCTTCCTCTCCAAAGCGCCAGAACCTCCTTCTCTTTGGAGAATGGGGAGGC CTCTTGGAGACACAGAGGGTTTCACCTTGGATGACCTCTAGAGAAATTGCCCAAGAAGCCCACCTTCTGGTCCCA ACCTGCAGACCCCACAGCAGTCAGTTGGTCAGGCCCTGCTGTAGAAGGTCACTTGGCTCCATTGCCTGCTTCCAA TGTTGTCCAGCAACGGTACCGTTTACACAGTCACCTCAGACACCATTTCACCTCCCTTGCCAAGCTGTTAGCC TTAGAGTGATTGCAGTGAACACTGTTTACACACCGTGAATCCATTCCCATCAGTCCATTCCAGTTGGCACCAGCC TGAACCATTTGGTACCTGGTGTTAACTGGAGTCCTGTTTACAAGGTGGAGTCGGGGCTTGCTGACTTCTCTTCAT TTGAGGTCACATTTTTCCCCCGTGGGGAAATAAACTGACTTTGGACTGCTTCAGTCTCTGCCATCTTCCATGACT GCATTTGTTCCTGCCTGCCTCGGCGGTATCCACAGAAGACAGGCAAGAGGATTGGAGCAGTTTTCTCACAGGTCT GCAATTCTGTTTTTCTCCAAGTACATTATGACCCCCTCATCCTTCTCTTGAACTGGAGAGGGGAAGAAATGAAAG GCATGCCCACGTCCGTCACCTCCCCTAGTCCCCACCTTGAACATCATGAGCTGTTGTTATTAGTCTTGG AAGCAGAGTCTGGGTTGGTGGATAGCAAAGGAGGAAGTCTGAGCCCCTCATTGGTCTTCCTCCCACCTGTCCC TTTTCCGGGAAGTTGTGGAATTGTTGGAAGAAGAGTTTGCAGAAGGTTAGGAATGGGTAGATAGCTAAGTCCTAA TCTATGGGTACATTGTTGTGTCCCAAACCAAAATTTTCCTTATCCACAATGTCCCTTCTGTCTCTCCACTTTAC AGTGGACTCGGCCACTGTGCATAGGCTTCTCTGCTCTCCATCAAATCACTTCCACTTTCCTGTGCCCCCACCCCC GCCTCCAGTTTTCCGCTAGTATCCGGCAAGGTTTCTTGCAACAAATGATTAGTTCTTTTCTTCTGACTCGTGGGG $\verb|CTCCCTGCTGCAGAGAGCACAGCCCTTGCCTGGAGCCCAGGAACCCCATCCTTGCTTCATCTCAGTTCTTCATGG|\\$ GCTTCACTCTTCCCACTCACGGAAGGGAGGTAGCTCAGGGACCTCCACTGTGGGACCCTTGAGACGCTTCCACTC TGATTCAGAAACACACTTCTACCTCTTTACTGTTAACTCTTAACAGATGCAGTCAGCAGTTTCTGGGCACTTCTC TCAGTAGGTGCCTCATGCTGACTTCTCCAGTAGGGTTTCAGGACAAACTACCAAGGAATTGCCTCAGCCTCCTAC TTTCTGCTTCAGCCTAAGCCAGTACTCCTTGTTTGAGGTAAAAGCCTTAAAATTTAGCTCCCTAGCTCTTGATTA

6195/6881 FIGURE 5723B

GAAGCAATTTGGAGTAAGTGTTTTTGATTTAGGCAGGGTAGCTTTGGGATACCTTTTTAAAAACACCAGATATTA AAATGTCTGGCAAGGTTAGAATCAGACTAGATGATTTGCTTCTAAAAATTAGTTTCAGTGAGTCCCAGGGACTAA TTAAGGTTTATTTTAAAAAGTGTCTACCTTGGTACGCAGCCACCTCCTGCATGCTGTGCATGTTATTGGGACTTG TATTATAGGTGATGGTATGTGAGAATCCAGTTGGGACTCGCTGTTGCCATCCTCTTTGTTATCTGGTTTTCAT ${\tt CACTAGACTCAGCAACCCTTCACCTTAACTGCCACCTTCCCTACACTCTCAGTTTACAGAGGCCACTGGGCCT}$ CGGGGCCTTGCCCCACCTCCTGTCTTTTCTCCTTGCCTTCCCCACTCCTGTGTCCTCCCATCTATCCTGTCTTT $\verb|CCTTTCCTCTCTCAGTGTCCTCAGCACCCACAAGGAATTTTCCTATCACTGTGAACTTTGCTGGTACAGAGGAA| \\$ GGGGGGTCGGGGGGAAAGAAAAAAAAAACCCTTAGTGGCCTGGTTGTTCAAAGGATAAGAATAGCTTTATCCTGCA CTCAGTACCCGAACTCACTTCAGTATGCTTACTGAGGCCATGAGAACCTGAGGGGCATCTGCCCAGGACAGGAGC CATGGCATATGACAAAGACCAATGAGGGACCAGGAAAAAAAGTGATGTCCCCTTTCCCTGCCACCTCCAGCCTCT GCCAGCAATGAGCTGTCCCCCTCCCACCCTACACAGTAGCTGGTCAGGGCTGAGTACAGTCCTGGGGGTAAGGGG ATGACATGCCCAGGTGTCAGCTCAAAGGATCTCTGCATCATCTTGAGGTGGGAGGCAGGGAAAGGAGCGCCAATG AGGTTCCCTGCAACCCCCGCCCTCCAGCCCACCGCCCAACCTTTTACAAATGGCATTTTCTTAATTGAAAATCCG GGAAGCAGGTGTGATTACTTTTTTGCTCGTAGATATTGTCCTAAGTTGGAATTCTCCCACTGCCCTAAAACTTTC $\tt CCTAGTAGTCCTTTAAACTCCCCCCTCCCTTTTTGGTAGCTGTTTTCTCCGTCCTCTCTCCACCTGCCCTCTTAT$ CTAGGAGCTGTTTGTAAGCACGATTTTTTTAACAGGTTATATTGTACAGGATCAATATTTTGCTTTTTAACAAGG ATATTTATGTAATAAGAAACTTTGCCTTAGGCAGGTGTTGGCCAGAAAAGTCCAGATTCCTCTGGGATCCCACCC TGGCCTCTCCTGGAACCTGCTGTGGAAGGAATTGGCCATGACCTTCACCTCTGGAGGTAGGGTCTAT GGCGAGGGAAAAGGGTGTTCACCATGATAACCTAGTGCCTCCATAGAGGGGTTTGGAAAAATTCCAGTCCGATTT CTTTGTGTGTCAGCTGACTTCCTTAGCTGATTGTTCCCACTTGCACCTCTCCACCTTTGGCACTAGAACTCCTGA GACACCACTTCTCATGCTTCTCCCTCCCTACCAGCGGTCAAGGCTTTGGAGCCACTCTTTTGTAACTCCAGATTA TTTAAAGAGAAAAGTACAAGACAGAAATCTTCTAGCACTTTGTAAACACAGTGAATAACCTCTTGGAGTATTTTT GGCTTTATATAAAACAAGGTTTTTAATTGTAAAGTATAAGTGCCATTAGAAAATGCACAGGGCATATCTTTGTTA AAGTAGATTTTTCAATGTTTTACAGAATTACATTTTCAAAAAAAGGTTTTTATAATGAAGTTGTTTATTAAAAAAACC TTCTGAATGATG

MTTFFTSVPPWIQDAKQEEEVGWKLVPRPRGREAESQVKCQCEISGTPFSNGEKLRPHSLPQPEQRPYSCPQLHC
GKAFASKYKLYRHMATHSAQKPHQCMYCDKMFHRKDHLRNHLQTHDPNKEALHCSECGKNYNTKLGYRRHLAMHA
ASSGDLSCKVCLQTFESTQALLEHLKAHSRRVAGGAKEKKHPCDHCDRRFYTRKDVRRHLVVHTGRKDFLCQYCA
QRFGRKDHLTRHVKKSHSQELLKIKTEPVDMLGLLSCSSTVSVKEELSPVLCMASRDVMGTKAFPGMLPMGMYGA
HIPTMPSTGVPHSLVHNTLPMGMSYPLESSPISSPAQLPPKYQLGSTSYLPDKLPKVEVDSFLAELPGSLSLSSA
EPQPASPQPAAAAALLDEALLAKSPANLSEALCAANVDFSHLLGFLPLNLPPCNPPGATGGLVMGYSQAEAQPLL
TTLQAQPQDSPGAGGPLNFGPLHSLPPVFTSGLSSTTLPRFHQAFQ

6197/6881 FIGURE 5725A

 $\verb|CCTGCTCTACTGCCCCTGCATGGGGCCGCTTTGGGAACCAGGCCGATCACTTCTTGGGCTCTCTGGCATTTGCAAA||$ GCTGCTAAACCGTACCTTGGCTGTCCCTCCTTGGATTGAGTACCAGCATCACAAGCCTCCTTTCACCAACCTCCA TGTGTCCTACCAGAAGTACTTCAAGCTGGAGCCCCTCCAGGCTTACCATCGGGTCATCAGCTTGGAGGATTTCAT GGAGAAGCTGGCACCCACCCACTGGCCCCTGAGAAGCGGGTGGCATACTGCTTTGAGGTGGCAGCCCAGCGAAG CCCAGATAAGAAGACGTGCCCCATGAAGGAAGGAAACCCCTTTGGCCCATTCTGGGATCAGTTTCATGTGAGTTT CAACAAGTCGGAGCTTTTTACAGGCATTTCCTTCAGTGCTTCCTACAGAGAACAATGGAGCCAGAGATTTTCTCC AAAGGAACATCCGGTGCTTGCCCTGCCAGGAGCCCCAGCCCAGTTCCCCGTCCTAGAGGAACACAGGCCACTACA GAAGTACATGGTATGGTCAGACGAAATGGTGAAGACGGGAGAGGCCCAGATTCATGCCCACCTTGTCCGGCCCTA TGTGGGCATTCATCTGCGCATTGGCTCTGACTGGAAGAACGCCTGTGCCATGCTGAAGGACGGGACTGCAGGCTC GCACTTCATGGCCTCTCCGCAGTGTGTGGGCTACAGCCGCAGCACAGCGGCCCCCCTCACGATGACTATGTGCCT GCCTGACCTGAAGGAGATCCAGAGGGCTGTGAAGCTCTGGGTGAGGTCGCTGGATGCCCAGTCGGTCTACGTTGC TACTGATTCCGAGAGTTATGTGCCTGAGCTCCAACAGCTCTTCAAAGGGAAGGTGAAGGTGAGCCTGAAGCC TGAGGTGGCCCAGGTCGACCTGTACATCCTCGGCCAAGCCGACCACTTTATTGGCAACTGTGTCTCCTCCTTCAC ${\tt GCGGGACGAGTTC} \underline{{\tt TGA}} {\tt TTCTGGCCGGAGCACCAGACCCTCTGATCCTGGAGGGACCAGAGTCTGAGCTGGTCCTT}$ GCCAGGGACCCCTCAAGGAGGGAGACGCTCCATATCCCAGGGCATAGGACTTGCAGGTTCCTAGGAGCAGGAGCA TCTCCCATCGCACGTGCTTTCTGCTCTTCTGGGAATTTCTCACACTGGCAAAGCAGTCCAGCCTCCGTCTTCTGG TCCACTCTGCTCTGAGCAGCCTGGGATGCTGAACTCTTCAGAGAGATTTTTTTATAGAGAGATTTCTATAATTTT GATACAAGGTCATGACTATCCTAGAACTCTCTGTGGTTTTTTGAAAATCATTGAATTCTATTAATGTAGGTACCTA AAGTGACCTTAACTGAATGTGGATGAGGCTGGGGCTGGTGTGGGTCTTTTGGCTGCTTTTCAAGGTGTCCCCCAA TGTGGCCCTCAAGAGCCATCCCCACTGCCTGGCCAGAGCCATTGTTGTCCCCTACTTCCTAGGCCATTTCTGGGG CTTGGGGGATGAATGCTGTCCTGTGCTGTAAACACTATGCAAATGGAAGTTATCGGTTGTGGTGCTGTGCAGCGC TCTGTGGGCGACTAAGTGCCACTCACGCAGCATGTTCCTGGCAAGGAGCACATACCATCAAGCCACACTATCATG GTATTGTTCTCACAGTCTTTTGGTGGTTGATGGCCACTGCAAACCTGGCACCATCAGATCTCTTCTGATCTCTTG CCCCAGTGGGGCCTGGTTGGTAGAATGTTGGCATTCGGTTGATATCCAAAGCCTGTTCTCCCAGCCGTCCTCCTG CAGCTGGAGCCTTCAGGCCGTATTCTCACGAGGGAACGTTTGCCAAGGCTCTGACCTCACAGAAGATGCCCAGGG CCCAGAAGCCATCAGAATTATCAGTGGAGAAGCACCTTTTGACTCTTCCCTTCCAATGTAATCTCTGCCAACACC ATGAGGCTTAAGGTGCTCTAAGTCATGAGTGTTTTGGTCTCAAATGCTGCAGTTTTAATAATCTGTGACTCCTGA GAGCCCATGGTTTTTTGACCTTGTGGTTCTAAAATTCCTTGTCTGACCCCTGTAGATCTTTTCCTTGCCATGTCA CCTCCCTTGGCCTTTGATCCTGGAAAGGTGGCAGAGCCTCCACTGAGCCAGGCCCAGAGCTCCTTGCAGTGCCTT CTTCCTTGTTTACCTGTGGGAGGAACACTTTTTTTGTCAGGGGCAGCCTGGTTCAGAGCTCAGAGGTCACACTG TATCAAAGATCTCAAACAGCAAAGTCAGCATTTGCTGTATAGAGCTGCCACCCAACTCTAAGCAGGAGAAACTGT ACAGAAAGGGCTTTGCTATTTTTCCCTTTTGGGAAAACAATGAAGTGTTTTAAGTCCTGGGTGGACTGAGAGATG GTTTGCCTGTCCAGACTTGCTCTCAAGCCTCATCCAGAGAAGGAGCTGCAGATGAGGGAGCCCGTACACTCCCTG CCACCACTAGGTTGTAAGCCTGTAGCTGGCTGATTTCATTTTGGAATTCATTTTGCCATCCACAGCCTTACA TCTGTCTCCCAGGCTGGAGTGCAGTGGCATGATCATGGCTTACTGCAGCCTTGATCTCCCAGGCTCAAGCGATCC TTCTGCCTCAGCCTCTCTGGTAGCTGAGACTGCATGCCCAGCTCCAAATCACCTTGATTCATATCAGCAGTAATA TCCTCTGACCCAATTTTCTTACCTATAAAATGGTGATAAAAACCGACAGGTTGTTCAAAGGCCCAGATCAGCTAA AGCATGTATATAAGAGCACGTTGTAAACTTGAAAGAGACAAAGGCACAAATGTGGCTGTTGATTAATTTGACTGC CCCAGCCCTGGGAAATAGGAGCTGTCATTATCCTTCTCTTTTCTGCACAAGGAAAAATTAATGCCCTGAGAATTGT CATAATTTTCCCAAGGCTGCCCAGCTGGTGGTGTTAAGCCAGAATTTGACCTCCCAGAGCCAGTTTCCATTAGCT GCCATGCTCTGCTGCCTCTAATTCACAGAATGCACTTTCTACCCTGTGTGCCATGGAGACCTCCTATGGAAAAAT

6198/6881 FIGURE 5725B

GATCAGCCACCTTACCTCTACTGGGTACCTGCTGTGAGTCTGCCTATGCCAGAAGGATTAAGGAGGGGAGGTTA CCCAAGAAACAAAGCCTACATGCCGCTTACAGCCCCCGTTGGATGGTTGCTCAGTACAACAGTCTTGCATTCAGC AGGTGTTTGTTCATCACCTACTATGTGTCAGGCTCTATGCTAGGTACTGGGGATACAGGAGAGAATCAAGCGTAA AGTCTTTGTTCTCAAGGAATTTGCATTCTAGAAAGTAGAAGATGTAATAAATGTACTGTGGGACATGTTAATAAG TGCTATAAAGAAATATAAAGGGTTTGGGAGCAAAAAGGGGAGTGGATCTATTTTAGATGAGCCCAGGTAAGACC TCTCTGAAGAGCTGTCATGAAGGAGGGAGGGAGCACATTCCTGGCAGAGAAAACAGCACGTGCAAAGGCCCCGAG GCAGGTCAGAGCAGCCGAGCTGACATTCTGCAGCCTGGACGGCCATGGCAGGAAGCTTTTAGTTGGAGAGATACA GGAAGCCTCCTAGGGTTCTGAGCAGAAGAGGGGCATGAGCTGATTCACATTCTGAAGGACCTCTCTAGCTGGCCA GTGCTGAGGAGGTTGGAGAGAGAGGGTGAAAGCAGAGAGACCAGTGCAGGGCTGTTAACAGGGTTGCAGGCGA GAGACTGGGGTGCTGGGCTCCCCTAGACTAGGACTCCAGTGCCCTCCTCTCCCAAGAGACAAAAGGCCATTGCATT GAAGGAGGTGGGAAATGATTAGATTCTGAACATATGTAATTATTTTTCAGTCTTTTTCAAAGATACAAATATTTA CATAGTTTTAATCATGTAATATATACAATTTAATGTCCTAGTGTTTTACTTAATAGTGTATCATGTTTTCCCTGT TGGTATGTAGCCTGGATAAATGCTCTTAATTATAAAAAATTCTGTCGAGGAGTGTTCCATAGTTTATTGTTTTCC TATTATGAGAATTTAGGCCAAGTGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGCGAGGCCGAGGTGGGCAGA TCACTTGAGGTGAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAATTATCTCTACTAAAAAATACAAAAAAATAA TAATAATAGCCAGGCGTGGTGGCACATGCCTGTATTCCCAGCTGCTTGGGAGGCTGAGGCAGGAGAATGGCTTGA ACCTGGGAGGTGGAGGTTGCAGTGAGCCGAGATGGTGCCACTGCATTCCAGCCTGGGCAACAGAGCGAGACTCCA TCTCAAAAAAAAGGAGACTTCATGTGCCCCCAATTTTTCACTATTGTTATTTGAAAAAATATTTTTATTTGTAAG TTGTGAGTAATAAAATGAACTCACAGTTTCAACAATGACCCAC

MGAAAWARPLSVSFLLLLIPLPGMPAGSWDPAGYLLYCPCMGRFGNQADHFLGSLAFAKLLNRTLAVPPWIEYQH HKPPFTNLHVSYQKYFKLEPLQAYHRVISLEDFMEKLAPTHWPPEKRVAYCFEVAAQRSPDKKTCPMKEGNPFGP FWDQFHVSFNKSELFTGISFSASYREQWSQRFSPKEHPVLALPGAPAQFPVLEEHRPLQKYMVWSDEMVKTGEAQ IHAHLVRPYVGIHLRIGSDWKNACAMLKDGTAGSHFMASPQCVGYSRSTAAPLTMTMCLPDLKEIQRAVKLWVRS LDAQSVYVATDSESYVPELQQLFKGKVKVVSLKPEVAQVDLYILGQADHFIGNCVSSFTAFVKRERDLQGRPSSF FGMDRPPKLRDEF

6200/6881 FIGURE 5727A

ACCCACTCCCGCTGCCCCGTCCGGCCCGCCGCCTCCTCGCAGCAGCTGCTCCCGGGCTCCGCGGCCGCAGCCCG CGTGGACGCTCCGAGCGCCCCCGACGGACGGGACCGGCTCCCTGGCGGTCGGGCGAGCGGGCGAACGCTGCC GACTCGATCCTCGTCAACGGGGCCTGCAGCGACCAGTCCTCCGACTCGCCCCCAATCCTGGAGGCTATCCGCACC GACTTGACAGGCGATGGCGACGGGGAAGATGGGGATGGCTCTGACACCCCAGTCATGCCAAAGCTCTTCCGGGAA ACCAGGACTCGTTCAGAAAGCCCAGCTGTCCGAACTCGAAATAACAACAGTGTCTCCAGCCGGGAGAGGCACAGG CCTTCCCCACGTTCCACCCGAGGCCGGCAGGGCCGCAACCATGTGGACGAGTCCCCCGTGGAGTTCCCGGCTACC AGGTCCCTGAGACGGCGGGCAACAGCATCGGCAGGAACGCCATGGCCGTCCCCTCCCAGCTCTTACCTTACCATC GACAGCCAGCAGGGGGGCATGGAGTCCCCGCAGGTGGAGGCAGACAGTGGAGATGGAGACAGTTCAGAGTATCAG GATGGGAAGGAGTTTGGAATAGGGGACCTCGTGTGGGGGAAAGATCAAGGGCTTCTCCTGGTGGCCCGCCATGGTG GTGTCTTGGAAGGCCACCTCCAAGCGACAGGCTATGTCTGGCATGCGGTGGGTCCAGTGGTTTGGCGATGGCAAG AAGCTCGTCTCCTATCGAAAAGCCATGTACCATGCTCTGGAGAAAGCTAGGGTGCGAGCTGGCAAGACCTTCCCC AGCAGCCCTGGAGACTCATTGGAGGACCAGCTGAAGCCCATGTTGGAGTGGGCCCACGGGGGCTTCAAGCCCACT CCCGCACCCAAGCGCCTCAAGACAAATTGCTATAACAACGGCAAAGACCGAGGGGATGAAGATCAGAGCCGAGAA CAAATGGCTTCAGATGTTGCCAACAACAAGAGCAGCCTGGAAGATGGCTGTTTGTCTTGTGGCAGGAAAAACCCC GTGTCCTTCCACCCTCTCTTGAGGGGGGGCTCTGTCAGACATGCCGGGATCGCTTCCTTGAGCTGTTTTACATG TATGATGACGATGGCTATCAGTCTTACTGCACTGTGTGCTGCGAGGGCCGAGAGCTGCTGCTTTGCAGCAACACG AGCTGCTGCCGGTGTTTCTGTGTGGAGTGCCTGGAGGTGCTGGTGGGCACAGGCACAGCCGAGGCCAAGCTT CAGGAGCCCTGGAGCTGTTACATGTGTCTCCCGCAGCGCTGTCATGGCGTCCTGCGGCGCCGGAAGGACTGGAAC GTGCGCCTGCAGGCCTTCTTCACCAGTGACACGGGGCTTGAATATGAAGCCCCCAAGCTGTACCCTGCCATTCCC GCAGCCCGAAGGCGGCCCATTCGAGTCCTGTCATTGTTTGATGGCATCGCGACAGGCTACCTAGTCCTCAAAGAG TTGGGCATAAAGGTAGGAAAGTACGTCGCTTCTGAAGTGTGGAGGAGTCCATTGCTGTTGGAACCGTGAAGCAC GAGGGGAATATCAAATACGTGAACGACGTGAGGAACATCACAAAGAAAAATATTGAAGAATGGGGCCCATTTGAC GGCCGGCTCTTCTTCGAATTTTACCACCTGCTGAATTACTCACGCCCCAAGGAGGGTGATGACCGGCCGTTCTTC TGGATGTTTGAGAATGTTGTAGCCATGAAGGTTGGCGACAAGAGGGACATCTCACGGTTCCTGGAGTGTAATCCA GTGATGATTGATGCCATCAAAGTTTCTGCTGCTCACAGGGCCCGATACTTCTGGGGCAACCTACCCGGGATGAAC AGGCCCGTGATAGCATCAAAGAATGATAAACTCGAGCTGCAGGACTGCTTGGAATACAATAGGATAGCCAAGTTA AAGAAAGTACAGACAATAACCACCAAGTCGAACTCGATCAAACAGGGGAAAAACCAACTTTTCCCTGTTGTCATG AATGGCAAAGAAGATGTTTTGTGGTGCACTGAGCTCGAAAGGATCTTTGGCTTTCCTGTGCACTACACAGACGTG TCCAACATGGGCCGTGGTGCCCGCCAGAAGCTGCTGGGAAGGTCCTGGAGCGTGCCTGTCATCCGACACCTCTTC AGGACCCAGGAGGTGTGATTCCTGAAGGCATCCCCAGGCCCTGCTCTTCCTCAGCTGTGTGGGTCATACCGTGTA CCTCAGTTCCCTCTTGCTCAGTGGGGGCAGAGCCACCTGACTCTTGCAGGGGTAGCCTGAGGTGCCGCCTCCTTG TGCACAAATCAGACCTGGCTGCTTGGAGCAGCCTAACACGGTGCTCATTTTTTCTTCTCCTAAAACTTTAAAACT TGAAGTAGGTAGCAACGTGGCTTTTTTTTTTCCCTTCCTGGGTCTACCACTCAGAGAAACAATGGCTAAGATAC CAAAACCACAGTGCCGACAGCTCTCCAATACTCAGGTTAATGCTGAAAAATCATCCAAGACAGTTATTGCAAGAG TTTAATTTTTGAAAACTGGCTACTGCTCTGTGTTTACAGACGTGTGCAGTTGTAGGCATGTAGCTACAGGACATT TTTAAGGGCCCAGGATCGTTTTTTCCCAGGGCAAGCAGAAGAGAAAATGTTGTATATGTCTTTTACCCGGCACAT TCCCCTTGCCTAAATACAAGGGCTGGAGTCTGCACGGGACCTATTAGAGTATTTTCCACAATGATGATTTTCA GCAGGGATGACGTCATCACATTCAGGGCTATTTTTTCCCCCACAAACCCAAGGGCAGGGGCCACTCTTAGCT

6201/6881 FIGURE 5727B

ACGAGACGAAGACGGAACCGGAGCCGGTTGCGGGCAGTGGACGCGGTTCTGCCGAGAGCCGAAGATGGCAGTGAA CGTATACTCAACGTCAGTGACCAGTGATAACCTAAGTCGACATGACATGCTGGCCTGGATCAATGAGTCTCTGCA GTTGAATCTGACAAAGATCGAACAGTTGTGCTCAGGGGCTGCGTATTGTCAGTTTATGGACATGCTGTTCCCTGG AGCAGGTTTTAAGAGAATGGGTGTTGACAAAATAATTCCTGTGGACAAATTAGTAAAAGGAAAGTTTCAGGACAA TTTTGAATTCGTTCAGTGGTTCAAGAAGTTTTTCGATGCAAACTATGATGGAAAAGACTATGACCCTGTGGCTGC CAGACAAGGTCAAGAAACTGCAGTGGCTCCTTCCCTTGTTGCTCCAGCTCTGAATAAACCGAAGAAAACCTCTCAC TTCTAGCAGTGCAGCTCCCCAGAGGCCCATCTCAACACAGAGAACCGCTGCGGCTCCTAAGGCTGGCCCTGGTGT GGTGCGAAAGAACCCTGGTGTGGGCAACGGAGACGACGACGAGGCAGCTGAGTTGATGCAGCAGGTCAACGTATTGAA ACTTACTGTTGAAGACTTGGAGAAAGAGGGGATTTCTACTTCGGAAAGCTACGGAACATTGAATTGATTTGCCA GGAGAACGAGGGGGAAAACGACCCTGTATTGCAGAGGATTGTAGACATTCTGTATGCCACAGATGAAGGCTTTGT GATACCTGATGAAGGGGGCCCACAGGAGGAGCAAGAAGAAGTATTAACAGCCTGGACCAGCAGAGCAACATCGGAA TTCTTCACTCCAAATCATGTGCTTAACTGTAAAATACTCCCTTTTGTTATCCTTAGAGGACTCACTGGTTTCTTT TCATAAGCAAAAAGTACCTCTTCTTAAAGTGCACTTTGCAGACGTTTCACTCCTTTTCCAATAAGTTTGAGTTAG GAGCTTTTACCTTGTAGCAGAGCAGTATTAACACCTAGTTGGTTCACCTGGAAAACAGAGAGGCTGACCGTGGGG CTCACCATGCGGATGCGGGTCACACTGAATGCTGGAGAGATGTTATGTAATATGCTGAGGTGGCGACCTCAGTGG AGAAATGTAAAGACTGAATTGAATTTTAAGCTAATGTGAAATCAGAGAATGTTGTAATAAGTAAATGCCTTAAGA GTATTTAAAATATGCTTCCACATTTCAAAATATAAAATGTAACATGACAAGAGATTTTGCGTTTGACATTGTGTC TGGGAAGGAAGGCCAGACCTTGGAACCTTTGGAACCTGCTGTCAACAGGTCTTACAGGGCTGCTTGAACCCTCA TAGGCCTAGGCTTTGGTCTAAAAGGAACATTTAAAAAGTTGCCCTGTAAAGTTATTTGGTGTCATTGACCAATTG CATCCCAGCTAAAAAGCAAGAGGCATCGTTGCCTGGATAATAGAGGATGTTTTCAGCCCTGAGATGTTACAGTT GAAGAGCTTGGTTTTCATTGAGCATTTCTCTATTTTTCCAGTTATCCCCGAAATTTCTATGTATTATATTTTTTG GGGAAGTGAGGTGTGCCCAGTTTTTTAATCTAACAACTACTTTTGGGGACTTGCCCACATCTCTGGGATTTGAAT GGGGATTGTATCCCATTTTACTGTCTTTTAGGTTTACATTTACCACGTTTCTCTTCTCTGCTCCCCTTGCCCACT TTCTTTCTGGACCTCTGGCAAAGGGAGTGGTCAGTGAAGGCCATCGTTACCTTGGGATCTGCCAGGCTGGGGTGT TTTCGGTATCTGCTGTTCACAGCTCTCCACTGTAATCCGAATACTTTGCCAGTGCACTAATCTCTTTGGAGATAA ATTCTGCAAAATGTGTCTCACCCACTACTGAGATTGTTCAGCCCCTGATGTATTTGTATTGATTTGTTTCTGGTG GTAGCTTGTCCTGAAATGTGTGTAGAAAGCAAGTATTTTATGATAAAAATGTTGTGTAGTGCATGCTCTGTGTGG AATTCAGAGGAAAACCCAGATTCAGTGATTAACAATGCCAAAAAATGCAAGTAACTAGCCATTGTTCAAATGACA GTGGTGCTATTTCTCTTTTGTGGCCTTTTAGACTTTTGTTGCCCTAAAATTCCATTTTATTGGGAACCCATTTTC

AGAGAGGAGCGGCCGAGGACTCCAGCGTGCCCAGGTCTGGCACTTGCTGCCCTCTGACACCTGGGAA GATGGCCGGCCCGTGGACCTTCACCCTTCTCTGTGGTTTGCTGGCAGCCACCTTGATCCAAGCCACCCTCAGTCC CACTGCAGTTCTCATCCTCGGCCCAAAAGTCATCAAAGAAAAGCTGACACGGAGCTGAAGGACCACAACGCCAC CCTGGTGAACACCGTCCTGAAGCACGTCATCTGGCTGAAGGTCATCACAGCTAACATCCTCCAGCTGCAGGTGAA GCCCTCGGCCAATGACCAGGAGCTGCTAGTCAAGATCCCCCTGGACATGGTGGCTGGATTCAACACGCCCCTGGT CACCCGCCTGGTCCTCAGTGACTGTGCCACCAGCCATGGGAGCCTGCGCATCCAACTGCTGCATAAGCTCTCCTT CCTGGTGAACGCCTTAGCTAAGCAGGTCATGAACCTCCTAGTGCCATCCCTGCCCAATCTAGTGAAAAACCAGCT GTGTCCCGTGATCGAGGCTTCCTTCAATGGCATGTATGCAGACCTCCTGCAGCTGGTGAAGGTGCCCATTTCCCT CAAGTTGTTGGACTCACAGGGAAAGGTGACCAAGTGGTTCAATAACTCTGCAGCTTCCCTGACAATGCCCACCCT GGACAACATCCCGTTCAGCCTCATCGTGAGTCAGGACGTGGTGAAAGCTGCAGTGGCTGCTGCTGTCCTCCAGA AGAATTCATGGTCCTGTTGGACTCTGTGCTTCCTGAGAGTGCCCATCGGCTGAAGTCAAGCATCGGGCTGATCAA TGAAAAGGCTGCAGATAAGCTGGGATCTACCCAGATCGTGAAGATCCTAACTCAGGACACTCCCGAGTTTTTTAT AGACCAAGGCCATGCCAAGGTGGCCCAACTGATCGTGCTGGAAGTGTTTCCCTCCAGTGAAGCCCTCCGCCCTTT GTTCACCCTGGGCATCGAAGCCAGCTCGGAAGCTCAGTTTTACACCAAAGGTGACCAACTTATACTCAACTTGAA TAACATCAGCTCTGATCGGATCCAGCTGATGAACTCTGGGGATTGGCTGGTTCCAACCTGATGTTCTGAAAAAACAT CATCACTGAGATCATCCACTCCATCCTGCCGAACCAGAATGGCAAATTAAGATCTGGGGTCCCAGTGTCATT GGTGAAGGCCTTGGGATTCGAGGCAGCTGAGTCCTCACTGAGCAAGGATGCCCTTGTGCTTACTCCAGCCTCCTT $\tt GTGGAAACCCACCTCTCCTGTCTCCCAG\underline{TGA} \tt AGACTTGGATGGCAGCCATCAGGGAAGGCTGGGTCCCAGCTGGG$ AAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

MAGPWTFTLLCGLLAATLIQATLSPTAVLILGPKVIKEKLTQELKDHNATSILQQLPLLSAMREKPAGGIPVLGS
LVNTVLKHVIWLKVITANILQLQVKPSANDQELLVKIPLDMVAGFNTPLVKTIVEFHMTTEAQATIRMDTSASGP
TRLVLSDCATSHGSLRIQLLHKLSFLVNALAKQVMNLLVPSLPNLVKNQLCPVIEASFNGMYADLLQLVKVPISL
SIDRLEFDLLYPAIKGDTIQLYLGAKLLDSQGKVTKWFNNSAASLTMPTLDNIPFSLIVSQDVVKAAVAAVLSPE
EFMVLLDSVLPESAHRLKSSIGLINEKAADKLGSTQIVKILTQDTPEFFIDQGHAKVAQLIVLEVFPSSEALRPL
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VKALGFEAAESSLSKDALVLTPASLWKPTSPVSQ

CCCTGCTGGGGCATCCCCGGCCTGTGATGCTCCCCGGTCTCCCCAGAACCGCTGTTGTCCCGGATGGGCAGCCTGC GGGCTCCCGTGGACGAGGACCGCCTGTCCCCGCTGGTGGCGGCCGACTCGCTCCTGGAGCATGTGCGGGAGGACT TCTCCGGCCTCCCTGAGGAGTTCATCAGCCTTTCCCCACCCCACGAGGCCCTCGACTACCACTTCGGCCTCG AGGAGGGCGAGGGCATCAGAGACCTCTTCGACTGTGACTTTGGGGACCTCACCCCCCTGGATTTCTGACAGGGCT TGGAGGGACCAGGGTTTCCAGAGATGCTCACCTTGTCTCTGCAGCCCTGGAGCCCCTGTCCCTGGCCGTCCTCC CAGCCTGTTTGGAAACATTTAATTTATACCCCTCTCCTCTGTCTCCAGAAGCTTCTAGCTCTGGGGTCTGGCTAC TGTGTACCGGGGGTGAATGTGTGTGAGCATGTGTGTGTGCATGTACCGGGGAATGAAGGTGAACATACACCTCTG AACTGCACTTTCGGCCCTTTTGCTCTGGGGGTCCCACAAGGCCCAGGGCAGTGCCTGCTCCCAGAATCTGGTGCT CTGACCAGGCCAGGTGGGGAGGCTTTGGCTGGCTGGGCGTGTAGGACGGTGAGAGCACTTCTGTCTTAAAGGTTT TTTCTGATTGAAGCTTTAATGGAGCGTTATTTATTTATCGAGGCCTCTTTGGTGAGCCTGGGGAATCAGCAAAGG GGAGGAGGGGTGTGGGGTTGATACCCCAACTCCCTCTACCCTTGAGCAAGGGCAGGGGTCCCTGAGCTGTTCTTC ${\tt CAGCCATGGGTGGTCAGATGGTGGGGTGGGCCCTCTCCAGGGGGCCCAGTTCAGGGCCCCAGCTGCCCCCAGGAT}$ GGATATGAGATGGGAGAGGTGAGTGGGGGACCTTCACTGATGTGGGCAGGAGGGGTGGTGAAGGCCTCCCCAGC GTTTTGGGACTCTGTTGGGAACATTTCGGGGCGGAGAGGCCAAGGTTGCTGGGGAAATGCCCATTCTCCACTTC ${\tt CCTTCTCCCTGTCCGTGCCCGATTTGATTTGAGCCTCATAACTCGAAGAAAGGTCAGCTTCCTCGCTGTTTTGGT}$ CCTAACTCAAAAGCAGATCCAGTAAAGGTTTTTGTTGT

MALAGAPAGGPCAPALEALLGAGALRILDSSQIVIISAAQDASAPPAPTGPAAPAAGPCDPDLLLFATPQAPRPT PSAPRPALGRPPVKRRLDLETDHQYLAESSGPARGRGRHPGKGVKSPGEKSRYETSLNLTTKRFLELLSHSADGV VDLNWAAEVLKVQKRRIYDITNVLEGIQLIAKKSKNHIQWLGSHTTVGVGGRLEGLTQDLRQLQESEQQLDHLMN ICTTQLRLLSEDTDSQRLAYVTCQDLRSIADPAEQMVMVIKAPPETQLQAVDSSENFQISLKSKQGPIDVFLCPE ETVGGISPGKTPSQEVTSEEENRATDSATIVSPPPSSPPSSLTTDPSQSLLSLEQEPLLSRMGSLRAPVDEDRLS PLVAADSLLEHVREDFSGLLPEEFISLSPPHEALDYHFGLEEGEGIRDLFDCDFGDLTPLDF

CGCGCGAGCGGCGCCAGCTCGGGGCAGCGGAACCCAGAGAAGCTGAGGGGGGCGGTAGCGGCGGCGACGACGA GCGGCAGTACCGCCTCCTTCCCAGCCGCGCGCTTCCTCCAGACCTCTCGGCGCGGGTGAGCCCTATTCCCAGAG GCAGGTGGTGCTGACCCTGTAACCCAAAGGAGGAAACAGCTGGCTAAGCTCATCATTGTTACTGGTGGGCACCAT GTCCTTGAAGCTTCAGGCAAGCAATGTAACCAACAAGAATGACCCCAAGTCCATCAACTCTCGAGTCTTCATTGG AAACCTCAACACAGCTCTGGTGAAGAAATCAGATGTGGAGACCATCTTCTCTAAGTATGGCCGTGTGGCCGGCTG TTCTGTGCACAAGGGCTATGCCTTTGTTCAGTACTCCAATGAGCGCCATGCCCGGGCAGCTGTGCTGGGAGAGAA TGGGCGGTGCTGGCCGGCCAGACCCTGGACATCAACATGGCTGGAGAGCCTAAGCCTGACAGACCCAAGGGGCT **AAAGAGAGCAGCATCTGCCATATACAGTGGCTACATCTTTGACTATGATTACTACCGGGACGACTTCTACGACAG** GCTCTTCGACTACCGGGGCCGTCTGTCGCCCGTGCCAGTGCCCAGGGCGGTCCCTGTGAAGCGACCCCGGGTCAC AGTCCCTTTGGTCCGGCGTGTCAAAACTAACGTACCTGTCAAGCTCTTTGCCCGCTCCACAGCTGTCACCACCAG CTCAGCCAAGATCAAGTTAAAGAGCAGTGAGCTGCAGGCCATCAAGACGGAGCTGACACAGATCAAGTCCAATAT CGATGCCCTGCTGAGCCGCTTGGAGCAGATCGCTGCGGAGCAAAAAGGCCAATCCAGATGGCAAGAAGAAGGGGTGA TGGAGGTGGCGCCGCGGCGCGGTGGTGGTGGCAGCGGTGGCGGTGGCAGTGGTGGTGGCGGTGGCGGTGG AGACGACGGCGATGAGGAAGGGCTCCTGACACACAGCGAGGAAGAGCTGGAACACAGCCAGGACACAGACGCGGA TGATGGGGCCTTGCAGTAAGCAGCCTGACAGGAGCAATGGCCACCAGCAGGTGAAGGGCATCGCTGCCCCAGGCC TCAAGCCGGCACCCAACCCTGGATGCCACCCCCAGCGGGTACCAGAGGAAAGCTGGCAGCAGGCGCCTCCTCC CCCAACGCATCCCAGCCAGTGCCATGTCCTCTGCAGGTGGAGTTACTGGCCTACTCCTTCCCCATGAGCCCTCCC TGTCTGCACTGCCCAGGCCAGAGGGTAGAGCACAGGGGTTTCCCCATACTACCTCCCCTCCCCAGGACACTCCCA **АААААААААА**А

PCT/US2003/028547

6208/6881 FIGURE **5734**

CGTTGAAGACATTGTCGGGTGGTGGGAGAGGTATCGGCAGGGGCAGCGCTGCCGCCGGGGCCTGGGGCTGACCCG TGAGCAAGAAGAAAAAGAAGAAGAAGCCTTTTATGTTAGATGAGGAAGGGGATACCCAAACAGAGGAAACCC AGCCTTCAGAAACAAAAGAAGTGGAGCCAGAGCCAACTGAGGACAAGGATTTGGAAGCTGATGAAGAGGACACTA AGATATTGATATTGATGAAGCTGAAGAAGGTGTAAAGGATCTTAAGATTGAAAGTGATGTTCAAGAACCAACTG AACCAGAGGATGACCTTGACATTATGCTTGGCAATAAAAAGAAGAAAAAAGAAGAATGTTAAGTTCCCAGATGAGG ATGAAATACTAGAGAAAGATGAAGCTCTAGAAGATGAAGACAACAAAAAAGATGATGGTATCTCATTCAGTAATC AGACAGGCCCTGCTTGGGCAGGCTCAGAAAGAGACTACACATACGAGGAGCTGCTGAATCGAGTGTTCAACATCA TGAGGGAAAAGAATCCAGATATGGTTGCTGGGGAGAAAAGGAAATTTGTCATGAAACCTCCACAAGTCGTCCGAG TAGGAACCAAGAAAACTTCTTTTGTCAACTTTACAGATATCTGTAAACTATTACATCGTCAGCCCAAACATCTCC TTGCATTTTTGTTGGCTGAATTGGGTACAAGTGGTTCTATAGATGGTAATAACCAACTTGTAATCAAAGGAAGAT TCCAACAGAAACAGATAGAAAATGTCTTGAGAAGATATATCAAGGAATATGTCACTTGTCACACATGCCGATCAC CGGACACAATCCTGCAGAAGGACATACGACTCTATTTCCTACAGTGCGAAACTTGTCATTCTAGATGTTCTGTTG CCAGTATCAAAACCGGCTTCCAGGCTGTCACGGGCAAGCGAGCACAGCTCCGTGCCAAAGCTAAC<u>TAA</u>TTTGCTA ATCACTGATTTTGCAAAGCTTGTTGTGGAGATGTGGCTGGACAGGTTTGCCATCAGAGTGGATATACCGTTGTAT AAGCTGTTGACATACTCATTGCCTACTTTAACACCTGTCAGAGAAACGTGATATGGGGTAAGGAGGTGCTTTTTT AAAATCGTTCATAGACTTCTGTAAAATGCAAGATAAATTAAAGTTATTATAACAGTGATTCTTTCA

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MSGDEMIFDPTMSKKKKKKKKPFMLDEEGDTQTEETQPSETKEVEPEPTEDKDLEADEEDTRKKDASDDLDDLNF FNQKKKKKKKKKIFDIDEAEEGVKDLKIESDVQEPTEPEDDLDIMLGNKKKKKKNVKFPDEDEILEKDEALEDED NKKDDGISFSNQTGPAWAGSERDYTYEELLNRVFNIMREKNPDMVAGEKRKFVMKPPQVVRVGTKKTSFVNFTDI CKLLHRQPKHLLAFLLAELGTSGSIDGNNQLVIKGRFQQKQIENVLRRYIKEYVTCHTCRSPDTILQKDIRLYFL QCETCHSRCSVASIKTGFQAVTGKRAQLRAKAN

 $\tt CTGAGGCCCAGCCCCTTCGCCCGTTTCCATCACGAGTGCCGCCAGCATC$ CCGACATCGGCCTGGCCTGGGGACGCAAGGCCCTGGACATTGCTGAGAACGAGATGCCGGGCCTGATGCGTA CGGCCGTCCTCATTGAGACCCTCGTCACCCTGGGTGCTGAGGTGCAGTGGTCCAGCTGCAACATCTTCTCCACCC AGGACCATGCGGCGGCTGCCATTGCCAAGGCTGGCATTCCGGTGTATGCCTGGAAGGGCGAAACGGACGAGGAGT ACCTGTGGTGCATTGAGCAGACCCTGTACTTCAAGGACGGCCCCTCAACATGATTCTGGACGACGGGGGCGACC TCACCAACCTCATCCACACCAAGTACCCGCAGCTTCTGCCAGGCATCCGAGGCATCTCTGAGGAGACCACGACTG CCAAGAGCAAGTTTGACAACCTCTATGGCTGCCGGGAGTCCCTCATAGATGGCATCAAGCGGGCCACAGATGTGA TGATTGCCGGCAAGGTAGCGGTGGTAGCAGGCTATGGTGATGTGGGCAAGGGCTGTGCCCAGGCCCTGCGGGGTT TCGGAGCCCGCGTCATCACCGAGATTGACCCCATCAACGCACTGCAGGCTGCCATGGAGGGCTATGAGGTGA CCACCATGGATGAGGCCTGTCAGGAGGGCAACATCTTTGTCACCACCACAGGCTGTATTGACATCATCCTTGGCC GGCACTTTGAGCAGATGAAGGATGATGCCATTGTGTGTAACATTGGACACTTTGACGTGGAGATCGATGTCAAGT GGCTCAACGAGAACGCCGTGGAGAAGGTGAACATCAAGCCGCAGGTGGACCGGTATCGGTTGAAGAATGGGCGCC GCATCATCCTGCTGGCCGAGGGTCGGCTGGTCAACCTGGGTTGTGCCATGGGCCACCCCAGCTTCGTGATGAGTA ACTCCTTCACCAACCAGGTGATGGCGCAGATCGAGCTGTGGACCCATCCAGACAAGTACCCCGTTGGGGTTCATT TCCTGCCCAAGAAGCTGGATGAGGCAGTGGCTGAAGCCCACCTGGGCAAGCTGAATGTGAAGTTGACCAAGCTAA $\tt CTGAGAAGCAAGCCCAGTACCTGGGCATGTCCTGTGATGGCCCCTTCAAGCCGGATCACTACCGCTAC\underline{TGA}GAGC$ CAGGTCTGCGTTTCACCCTCCAGCTGCTGTCCTTGCCCAGGCCCCACCTCTCCCTAAGAGCTAATGGCACCA ACTTTGTGACTGGTTTGTCAGTGTCCCCCATCGACTCTCTGGGGCTGATCACTTAGTTTTTGGCCTCTGCTGCAG $\verb|CCGTCATACTGTTCCAAATGTGGCAGCGGGAACAGAGTACCCTCTTCAAGCCCCGGTCATGATGGAGGTCCCAGC| \\$ GGAGTCACAAAGCCCATGTGTTTTGCCATCTAGGCCTTCACCTGGTCTGTGGACTTATACCTGTGTGCTTGGTTT ACAGGTCCAGTGGTTCTTCAGCCCATGACAGATGAGAAGGGGCTATATTGAAGGGCAAAGAGGAACTGTTGTTTG AATTTTCCTGAGAGCCTGGCTTAGTGCTGGGCCTTCTCTTAAACCTCATTACAATGAGGTTAGTACTTTTAGTCC AGGGGCCAGAAAAACATGAATGCAGGCAGATTTCGTGAAATCTGCCACCACTTTATAACCAGATGGTTCCTTTCA TGGTGCCTGG

MSDKLPYKVADIGLAAWGRKALDIAENEMPGLMRMRERYSASKPLKGARIAGCLHMTVETAVLIETLVTLGAEVQ WSSCNIFSTQDHAAAAIAKAGIPVYAWKGETDEEYLWCIEQTLYFKDGPLNMILDDGGDLTNLIHTKYPQLLPGI RGISEETTTGVHNLYKMMANGILKVPAINVNDSVTKSKFDNLYGCRESLIDGIKRATDVMIAGKVAVVAGYGDVG KGCAQALRGFGARVIITEIDPINALQAAMEGYEVTTMDEACQEGNIFVTTTGCIDIILGRHFEQMKDDAIVCNIG HFDVEIDVKWLNENAVEKVNIKPQVDRYRLKNGRRIILLAEGRLVNLGCAMGHPSFVMSNSFTNQVMAQIELWTH PDKYPVGVHFLPKKLDEAVAEAHLGKLNVKLTKLTEKQAQYLGMSCDGPFKPDHYRY

 ${\tt GGGAGAACCGTTCGCGGAGGAAAGGCGAACTAGTGTTGGG} \underline{\textbf{ATG}} {\tt GCCACCAACTGGGGGAGCCTCTTGCAGGATAA}$ ${\tt ACAGCAGCTAGAGGAGCTGGCACGGCCGTGGACCGGGCCCTGGCTGAGGGAGTATTGCTGAGGACCTCACA}$ GGAGCCCACTTCCTCGGAGGTGGTGAGCTATGCCCCATTCACGCTCTTCCCCTCACTGGTCCCCAGTGCCCTGCT GGAGCAAGCCTATGCTGTGCAGATGGACTTCAACCTGCTAGTGGATGCTGTCAGCCAGAACGCTGCCTTCCTGGA AGAGGGCATTGCCCAGACTGTTCCTGGGCCTGAATCGCTCAGACTACATGTTCCAGCGCAGCGCAGATGGCTC CCCAGCCTGAAACAGATCGAAATCAACACCATCTCTGCCAGCTTTGGGGGCCTGGCCTCCCGGACCCCAGCTGT GCACCGACATGTTCTCAGTGTCCTGAGTAAGACCAAAGAAGCTGGCAAGATCCTCTCTAATAATCCCAGCAAGGG ACTGGCCCTGGGAATTGCCAAAGCCTGGGAGCTCTACGGCTCACCCAATGCTCTGGTGCTACTGATTGCTCAAGA GAAGGAAAGAAACATATTTGACCAGCGTGCCATAGAGAATGAGCTACTGGCCAGGAACATCCATGTGATCCGACG AACATTTGAAGATATCTCTGAAAAGGGGTCTCTGGACCAAGACCGAAGGCTGTTTGTGGATGGCCAGGAAATTGC TGTGGTTTACTTCCGGGATGGCTACATGCCTCGTCAGTACAGTCTACAGAATTGGGAAGCACGTCTACTGCTGGA CAGGCCGGGCATGCTGGAGATGTTGCTCCCTGGCCAGCCTGAGGCTGTGGCCCGCCTCCGCGCCCACCTTTGCTGG CCTCTACTCACTGGATGTGGGTGAAGAAGGGGACCAGGCCATCGCCGAGGCCCTTGCTGCCCCTAGCCGGTTTGT GCTAAAGCCCCAGAGAGAGGGTGGAGGTAACAACCTATATGGGGAGGAAATGGTACAGGCCCTGAAACAGCTGAA GGACAGTGAGGAGAGGGCCTCCTACATCCTCATGGAGAAGATCGAACCTGAGCCTTTTGAGAATTGCCTGCTACG GACACTCGTGATGAACAAGCACGTGGGGCATCTACTTCGAACCAAAGCCATCGAGCATGCAGATGGTGGTGGTGGC ${\tt AGCGGGAGTGGCAGTCCTGGACAACCCATACCCTGTG} \underline{{\tt TGA}}{\tt GGGCACAGGCCACGGGACCTTCTATCCTCTG}$ TATTTGTCATTCCTCCTAGCCCTCCTGAGGGGTATCCTCCTAAAGACCTCCAAAGTTTTTATGGAAGGGTAAA TACTGGTACCTTCCCCCAGCTTTCCATCTGAGGACCAGAAAAGTTGTGTCTCCCTTAGATGAGATCTAGACGCCC CCAAATCCTTGAGATGTGGGTATAGCTCAGGGTAAGCTGCTCTGAGGTAAAGGTCCATGAACCCTGCCCCACTCC TGTCAGCCCTCATCAGCCTTTTCAGCAGGTTCCAGTGCCTGACTTGGGATAGGACTGAGTGGTAGGAGGAGGGG

MATNWGSLLQDKQQLEELARQAVDRALAEGVLLRTSQEPTSSEVVSYAPFTLFPSLVPSALLEQAYAVQMDFNLL VDAVSQNAAFLEQTLSSTIKQDDFTARLFDIHKQVLKEGIAQTVFLGLNRSDYMFQRSADGSPALKQIEINTISA SFGGLASRTPAVHRHVLSVLSKTKEAGKILSNNPSKGLALGIAKAWELYGSPNALVLLIAQEKERNIFDQRAIEN ELLARNIHVIRRTFEDISEKGSLDQDRRLFVDGQEIAVVYFRDGYMPRQYSLQNWEARLLLERSHAAKCPDIATQ LAGTKKVQQELSRPGMLEMLLPGQPEAVARLRATFAGLYSLDVGEEGDQAIAEALAAPSRFVLKPQREGGGNNLY GEEMVQALKQLKDSEERASYILMEKIEPEPFENCLLRPGSPARVVQCISELGIFGVYVRQEKTLVMNKHVGHLLR TKAIEHADGGVAAGVAVLDNPYPV

GGAAGAACCCGCAGCAGCTCCCAGGATGAACTGGTTGCAGTGGCTGCTGCTGCTGCGGGGGGCGCTGAGAGGACAC GAGCTCTATGCCTTTCCGGCTGCTCATCCCGCTCGGCCTCCTGTGCGCGCTGCTGCCTCAGCACCATGGTGCGCC AGGTCCCGACGGCTCCGCCCAGATCCCGCCCACTACAGGGAGCGAGTCAAGGCCATGTTCTACCACGCCTACGA CAGCTACCTGGAGAATGCCTTTCCCTTCGATGAGCTGCGACCTCTCACCTGTGACGGGCACGACACCTGGGGCAG TTTCTCTCTGACTCTAATTGATGCACTGGACACCTTGCTGATTTTGGGGAATGTCTCAGAATTCCAAAGAGTGGT AGGAGGACTCCTGTCTGCTCTCCCAAGAAGGCTGGGGTGGAAGTAGAGGCTGGATGGCCCTGTTCCGG GCCTCTCCTGAGAATGGCTGAGGAGGCGGCCCGAAAACTCCTCCCAGCCTTTCAGACCCCCACTGGCATGCCATA TGGAACAGTGAACTTACTTCATGGCGTGAACCCAGGAGAGACCCCTGTCACCTGTACGGCAGGGATTGGGACCTT CATTGTTGAATTTTGCCACCCTGAGCAGCCTCACTGGTGACCCGGTGTTCGAAGATGTGGCCAGAGTGGCTTTGAT TAAGAAGCTCATGGCCATGTTCCTAGAGTATAACAAAGCCATCCGGAACTACACCCGCTTCGATGACTGGTACCT GTGGGTTCAGATGTACAAGGGGACTGTGTCCATGCCAGTCTTCCAGTCCTTGGAGGCCTACTGGCCTGGTCTTCA GAGCCTCATTGGAGACATTGACAATGCCATGAGGACCTTCCTCAACTACTACTACTGTATGGAAGCAGTTTGGGGG GCTCCCGGAATTCTACAACATTCCTCAGGGATACACAGTGGAGAAGCGAGAGGGCTACCCACTTCGGCCAGAACT TATTGAAAGCGCAATGTACCTCTACCGTGCCACGGGGGATCCCACCCTCCTAGAACTCGGAAGAGATGCTGTGGA ATCCATTGAAAAAATCAGCAAGGTGGAGTGCGGATTTGCAACAATCAAAGATCTGCGAGACCACAAGCTGGACAA ${\tt CAACAATGGGTCCACCTTCGACACGGTGATCACCCCCTATGGGGAGTGCATCCTGGGGGGTTGCATCTT}$ GGAGGACTTGATGAGGGAATTCTACTCTCTCAAACGGTGCAGGTCGAAATTTCAGAAAAACACTGTTAGTTCGGG GCCATGGGAACCTCCAGCAAGGCCAGGAACACTCTTCTCACCAGAAAACCATGACCAGGCAAGGGAAGGGAAGGC TGCCAAACAGAAGGTCCCACTTCTCAGCTGCCCCAGTCAGCCCTTCACCTCCAAGTTGGCATTACTGGGACAGGT TTTGGCTATC

MPFRLLIPLGLLCALLPQHHGAPGPDGSAPDPAHYRERVKAMFYHAYDSYLENAFPFDELRPLTCDGHDTWGSFS
LTLIDALDTLLILGNVSEFQRVVEVLQDSVDFDIDVNASVFETNIRVVGGLLSAHLLSKKAGVEVEAGWPCSGPL
LRMAEEAARKLLPAFQTPTGMPYGTVNLLHGVNPGETPVTCTAGIGTFIVEFATLSSLTGDPVFEDVARVALMRL
WESRSDIGLVGNHIDVLTGKWVAQDAGIGAGVDSYFEYLVKGAILLQDKKLMAMFLEYNKAIRNYTRFDDWYLWV
QMYKGTVSMPVFQSLEAYWPGLQSLIGDIDNAMRTFLNYYTVWKQFGGLPEFYNIPQGYTVEKREGYPLRPELIE
SAMYLYRATGDPTLLELGRDAVESIEKISKVECGFATIKDLRDHKLDNRMESFFLAETVKYLYLLFDPTNFIHNN
GSTFDTVITPYGECILGAGGYIFNTEAHPIDPAALHCCQRLKEEQWEVEDLMREFYSLKRCRSKFQKNTVSSGPW
EPPARPGTLFSPENHDQARERKPAKQKVPLLSCPSQPFTSKLALLGQVFLDSS

MAVRASFENNCEIGCFAKLTNTYCLVAIGGSENFYSVFEGELSDTIPVVHASIAGCRIIGRMCVGNRHGLLVPNN TTDQELQHIRNSLPDTVQIRRVEERLSALGNVTTCNDYVALVHPDLDRETEEILADVLKVEVFRQTVADQVLVGS YCVFSNQGGLVHPKTSIEDQDELSSLLQVPLVAGTVNRGSEVIAAGMVVNDWCAFCGLDTTSTELSVVESVFKLN EAQPSTIATSMRDSLIDSLT

6218/6881 FIGURE 5744A

CGTTCGGGCAGCGCCTCTTGTTACCCGGGGCCCGCTTGCCTCAGCTTCTTGCTGCCGCCAGCACGCTAAGCTCC AGTCGGCGCCGAAGGAGGACTTCCCGACCTCGTGTCCAGTAGCCGCAATCCCAGGCTGGGAGGGTGAGGCGCCG CGCTCTGCCGCCCCCCGCCCCTCGTCCCTGTGTCCTGGCGGATTTGCACGTAATCTATCCGAAAGCCCAGTCC CACCCGCCACCCGACTCTGGAGCTCCCATTCTTCAGGACCCTGCTGAAGTATCGCTTCTCAGCCGCCTTCTCCAG GCGCAGCTGCATTCGCTTCTCGGTTTTTGCACTCGCTGTGCACCCGAGTTACTTTCCCGGCCCCTCGTTGACACCG TTCACAGGTGGCTGTTTGGTATTTAGTAAGGGTGCTGTCTTCCCTGTCTGATCCTTAGCAAAAGTAGGAAGGTAGA GTTGTTGGCAGAAATCCTGGGATAAGAGAATAGTTTCCTGGAAGATCTGTGCCTCCAACCAGCAGAGAGGGATTG AGCTTCATTGAACTCAACAGAGCCAACATTTCATAGCACCATGTTCAAGAGGGGGTTGAAGTGGCATGGCAATGG TTAGAGACCCTGCTGGGCGTGAACACCCTCTGGCTACCTAGGGACCTGTGGGCCTACCACCTGGTGCCCTCATGG AGACAAGAAGCCCTGGGTTGAACAACATGAAGCCCCAGTCACTGCAGCTGGTACTGGAAGAGCAGGTGCTGGCAC TACAGCAGCAGATGGCAGAGAATCAGGCAGCCTCCTGGCGGAAGCTGAAGAACTCCCAGGAGGCCCAGCAGAGAC AAGCAACCCTTGTGAGGAAGCTGCAGGCCAAGGTGCTGCAGTACCGAAGCTGGTGCCAAGAGCTGGAGAAGCGGC TAGAAGCCACTGGAGGACCAATCCCCCAGAGGTGGGAAAATGTGGAGGAGCCAAACCTGGATGAGCTGCTGGTCC GATTGGAGGAGGAGCAACAGAGGTGTGAGAGTCTAGCAGAGGTGAACACCCAGCTTCGACTGCACATGGAAAAAG CTGACGTGGTGAATAAAGCCCTTAGGGAAGATGTGGAAAAACTGACAGTGGACTGGAGCCGGGCCCGGGATGAGC TAATGAGGAAGGAGGCCAGTGGCAGATGGAGCAGGAGTTCTTCAAGGGCTACCTGAAAGGGGAGCACGGTCGCC TTCTCAGTCTATGGCGGGAGGTTGTGACATTCCGACGCCACTTCCTGGAAATGAAGTCAGCTACTGACAGAGATC TGATGGAGCTAAAAGCTGAGCATGTGAGGCTTTCAGGGTCTCTGTTGACCTGTTGTCTGCGCTTGACTGTGGGAG AGACCCAGGAGCTGGAGAAGGCAAGCCCATGAAAGGAGCCAGGAGTTAATACAGCTGAAGAGTCAAGGGGATCTGG AGAAGGCTGAACTTCAGGACCGGGTGACCGAGCTCTCTGCTCTGTTGACCCAGTCTCAGAAGCAAAATGAAGATT ATGAAAAGATGATAAAGGCTCTGAGAGAGACAGTGGAGATCCTGGAGACAAATCACACAGAATTAATGGAACATG AAGCATCTCTTAGTAGGAATGCGCAAGAGGAGAAGTTGTCTTTACAGCAGGTGATCAAGGATATAACCCAGGTCA TGGTGGAAGAGGGGACAATATAGCCCAAGGCTCTGGTCATGAGAACTCTTTGGAATTGGACTCTAGTATCTTCT CCCAGTTTGATTACCAGGATGCAGACAAGGCTCTTACTCTGGTGCGTTCAGTGCTGACTCGGAGACGCCAGGCTG TGCAGGACCTAAGGCAGCAGCTTGCAGGCTGTCAAGAGGCTGTGAACTTGTTGCAACAGCAGCATGATCAGTGGG AGGAAGAGGGCAAAGCCTTGAGACAGCGGCTGCAGAAGCTCACTGGGGAGCGGGACACTCTGGCAGGGCAGACTG TGGACCTCCAGGGAGAGGTGGACTCTCTCAGCAAGGAGCGAGAGCTGCTGCAGAAGGCCAGGGAAGAGCTGCGGC AGCAGCTGGAGGTGCTAGAGCAGGAGGCATGGCGCCTGCGAAGGGTAAATGTGGAGCTTCAGCTGCAGGGGGACT CTGCCCAGGGCCAGAAGGAGGAACAGCAGGAGGAGCTGCACCTGGCTGTCCGGGAGAGGGAGCGTCTTCAGGAGA TGCTGATGGGCCTGGAAGCCAAACAGTCAGAATCACTCAGTGAACTGATCACTCTTCGGGAAGCCCTGGAGTCAA GTCACCTGGAAGGGGAGTTACTGAGGCAAGAGCAAACGGAAGTGACCGCAGCGCTGGCTAGGGCAGAGCAGTCAA TTGCAGAGCTGTCGAGTTCTGAAAACACCCTGAAGACAGAAGTAGCTGATCTTCGGGCTGCAGCTGTCAAGCTCA GTGCCTTAAATGAGGCTTTGGCGTTAGATAAAGTTGGGCTGAACCAGCAGCTTCTCCAGTTAGAGGAGGAGAACC AGTCTGTGTGCAGCAGAATGGAGGCCGCAGAGCAGGCGAGAAATGCTTTGCAGGTCGACCTGGCGGAGGCAGAGA AGAGGAGGGAAGCCCTGTGGGAAAAGAACACTCACCTGGAGGCTCAGCTGCAGAAAGCTGAGGAGGCTGGGGCTG AGCTGCAGGCAGATCTCAGGGACATCCAAGAAGAAGAAGAAATTCAAAAGAAACTAAGTGAGTCACGTCACC AGCAGGAGGCAGCCACGACTCAGCTGGAGCAGCTACATCAGGAGGCAAAGCGACAGGAAGAAGTGCTTGCCAGGG CAGTCCAGGAGAAGGAGGCCCTAGTACGAGAGAAAGCGGCTCTAGAGGTGCGGCTGCAGGCCGTGGAGCGTGACC AACAACAAAATTCTGTGATAGAGGTCACCAAGGGGCAGCTGGAGGTCCAGATTCAAACTGTCACTCAAGCCAAGG AAGTAATCCAAGGGGAAGTGAGGTGCCTGAAGCTGGAACTGGACCTGAACGGAGTCAGGCAGAGCAGGAGCGGG ATGCTGCAGCCAGACAGCTGGCCCAGGCTGAGCAAGAAGGGAAGACTGCCTTGGAGCAGCAGAAGGCAGCCCATG AGAAAGAGGTGAACCAGCTCCGGGAGAAATGGGAGAAGGAGCGCTCCTGGCACCAGCAGGAGCTGGCAAAGGCTC AGGCCCAGAGGGAAGAAGAACGGACCCAGGCAGAGAGTGCCCTATGCCAGATGCAGCTGGAAACAGAGAAGGAGA GGCAGGACATGAAAGTCCAGAAATTAAAGGAGCAGGAGACCACTGGGATACTACAGACCCAGCTCCAGGAGGCTC

6219/6881 FIGURE 5744B

AACGGGAGCTGAAGGAGGCAGCCCGGCAGCACAGAGATGACCTTGCTGCCCTCCAAGAAGAGAGCAGCTCCCTGC TGCAGGATAAGATGGACCTGCAGAAGCAGGTGGAGGACTTGAAGTCTCAGCTGGTGGCCCAGGATGACTCCCAGA GGCTGGTGGAGCAGGAGGTTCAGGAGAAGCTGAGAGAGCCCAGGAGTATAACCGAATTCAGAAGGAGCTGGAGA GAGAGAAAGCCAGCCTGACTCTGTCACTGATGGAAAAGGAACAGAGACTCCTTGTTTTACAAGAAGCTGACTCTA TTCGACAACAAGAGCTGAGTGCCCTGCGCCAGGACATGCAGGAGGCCCAGGGAGAACAGAAAGAGCTCAGTGCTC AGATGGAATTACTAAGGCAAGAGGTGAAGGAAAAGGAGGCTGACTTTCTGGCCCAGGAAGCACAGCTGCTGGAGG AGCTGGAGGCGTCTCATATCACGGAGCAGCAGCTGCGAGCCTCCTTGTGGGCCCAGGAAGCCAAGGCAGCCCCAAC TACAGCTGCGACTGCGCAGCAGAGAGCCAGCTAGAAGCGCTGGCCGCAGAGCAGCCCGGGAACCAGGCCC AGGCCCAGGCCCAGCTGGCCAGCTCTACTCTGCCCTGCAGCAGGCCCTGGGGTCTGTTTGTGAGAGCAGGCCTG AGCTGAGTGGTGGGGGAGACTCTGCTCCTTCCGTCTGGGGCCTTGAGCCAGACCAGAATGGAGCTAGGAGCCTCT TTAAGAGAGGGCCCCTGCTGACTGCTCTCCCGCTGAGGCAGTAGCATCTGCCCTCCACAAGCTTCATCAAGACC TGTGGAAGACTCAACAGACCCGGGATGTTCTGAGGGATCAGGTCCAGAAACTGGAAGAGCGTCTAACTGATACTG AGGCTGAGAAGAGCCAGGTCCACACAGAGTTGCAGGATCTGCAGAGACAGCTCTCCCAGAATCAGGAAGAGAAAT CCAAGTGGGAAGGAAGCAGAACTCCCTAGAATCTGAGCTGATGGAACTACATGAAACTATGGCATCCTTACAGA GTCGCCTGCGGAGAGCAGAGCTACAGCGAATGGAAGCCCAGGGTGAGCGAGAGTTACTTCAGGCAGCCAAGGAGA ACCTGACAGCCCAGGTGGAACACCTGCAAGCAGCTGTCGTAGAAGCCAGGGCTCAGGCAAGTGCTGGCATCC TGGAAGAAGACCTGAGAACGGCTCGCTCAGCACTGAAGCTGAAAAATGAGGAAGTAGAGAGTGAGCGTGAGAGAG CCCAGGCTCTGCAAGAGCAGGCGAACTGAAGGTGGCCCAAGGGAAGGCTCTGCAAGAGAATTTGGCCCTCCTGA $\tt CCCAGACCCTAGCTGAAAGAGAAGAGGAGGTGGAGACTCTGCGGGGACAAATCCAGGAACTGGAGAAGCAACGGG$ AAATGCAGAAGGCTGCTTTGGAATTGCTGTCTCTGGACCTGAAGAAGAGGAACCAAGAGGTAGATCTGCAGCAAG AACAGATTCAGGAGCTAGAGAAGTGTAGGTCTGTTTTAGAGCATCTGCCCATGGCCGTCCAGGAGCGAGAGCAGA AGCTGACTGTGCAGAGGGAGCAGATCAGAGAGCTCGAGAAGGATCGGGAGACTCAGAGGAACGTCTTGGAGCATC AGCTTCTAGAACTTGAGAAGAAGACCAAATGATTGAGTCCCAGAGAGACAGGTTCAGGACCTGAAAAAGCAGT TGGTTACTCTGGAATGCCTGGCCCTGGAACTGGAGGAAAACCATCACAAGATGGAGTGCCAGCAAAAACTGATCA AGGAGCTGGAGGGCCAGAGGGAAACCCAGAGAGTGGCTTTGACCCACCTTACGCTGGACCTAGAAGAAAGGAGCC AGGAGCTGCAGGCACAAAGCAGCCAGATCCATGACCTGGAGAGCCACAGCACCGTTCTGGCAAGAGAGCTGCAGG AGAGGGACCAGGAGGTGAAGTCTCAGCGAGAACAGATCGAGGAGCTGCAGAGGCAGAAAGAGCATCTGACTCAGG ATCTCGAGAGAGAGACCAGGAGCTGATGCTGCAGAAGGAGGATTCAGGTTCTCGAGGATCAGAGGACCCGGC AGACCAAGATCCTGGAGGAGGACCTGGAACAGATCAAGCTGTCCTTGAGAGAGGCGAGGCCGGGAGCTGACCACTC TGAAGCTGATCCTGCGTGATAAGGAGAAGGAGGTGGAATGTCAGCAGGAGCATATCCATGAACTCCAGGAGCTCA AGCAGGAAATAGTGGTCCTGCAGCAACTGCAGGAAGCCAGGGAACAAGGGGAGCTGAAGGAGCAGTCACTTC AGAGTCAACTGGATGAGGCCCAGAGAGCCCTAGCCCAGAGGGACCAGGAACTGGAGGCTCTGCAGCAAGAACAGC AGCAGGCCCAGGGACAGGAGAGAGGGTGAAGGAAAAGGCAGACGCCCTCCAGGGAGCTCTGGAGCAAGCCCATA TGACACTGAAGGAGCGTCATGGAGAGCTTCAGGACCACAAGGAACAGGCACGAAGGCTGGAGGAAGAGCTGGCAG TGGAGGGACGGCGGGTCCAGGCCCTGGAGGAGGTGCTGGGAGACCTAAGGGCTGAGTCTCGGGAACAGGAGAAAG CTCTGTTGGCCCTCCAGCAGCAGTGTGCTGAGCAGGCACAGGAGCATGAGGTGGAGACCAGGGCCCTGCAGGACA CCCGGCATCAGGAGGAGGCTGCCCGGGCCCGGGCTGAGGCTCTGCAGGAGGCCCTTGGCAAGGCTCATGCTGCCC TGCAGGGGAAAGAGCAGCATCTCCTCGAGCAGGCAGAATTGAGCCGCAGTCTGGAGGCCAGCACTGCAACCCTGC AAGCCTCCCTGGATGCCTGCCAGGCACACTCGGCAGCTGGAGGAGGCTCTGAGGATACAAGAAGGTGAGATCC AGGACCAGGATCTCCGATACCAGGAGGATGTGCAGCAGCTGCAGCAGCACTTGCCCAGAGGGATGAAGAGCTGA GACATCAGCAGGAACGGGAGCAGCTGCTGGAGAAGTCTCTGGCCCAGAGGGTCCAAGAGAATATGATCCAAGAGA AGCAGAATCTGGGGCAAGAGAGAGAGAGAGGGGGGGAGATAAGGGGCCTTCATCAGAGTGTAAGGGAGCTACAGCTGA CTCTAGCCCAAAAGGAACAGGAGATTCTGGAGCTGAGGGAGACCCAGCAAAGGAACAACCTGGAAGCCTTACCCC ACAGCCACAAAACCTCCCCAATGGAGGAACAATCTCTAAAACTTGATTCTTTAGAGCCCAGGCTGCAGCGGGAGC

6220/6881 FIGURE **5744C**

CACTCTCCCTAGCGCAGACCAAGGCCAGTGTCAGCAGTCTGCAGGAGGTAGCCATGTTCCTACAAGCCTCTGTCC TGGAGCGGGACTCAGAACAGCAAAGGCTGCAGGATGAACTGGAGCTCACCAGACGGGCTCTGGAGAAGGAGCGGC TACACAGCCCAGGTGCAACCAGCAGAACTGGGGTCCAGAGGGGAGCAGGGTGTGCAGCTGGGAGAGGTCT CAGGAGTGGAGGCTGAGCCTAGTCCTGATGGAATGGAGAGCAGTCATGGAGACAAAGGCTTGAACACCTGCAGC AAGCAGTGGCCCGGCTGGAGATTGACAGGAGCAGGCTGCAGCGCCACAATGTCCAGCTGCGGAGTACCTTGGAGC TGCAGAAAGAGGTGGTCCTGCTGCAAGCTCAGCTGACTTTGGAGCGGAAGCAGAAGCAGGACTACATCACCCGCT CTGAGGCCACTGTCCTGGAGGCAGAGACCCGCAGGCTGGATGAGTCCCTGACTCAAAGTCTGACATCCCCAGGGC CAGTCCTGCTACACCCCAGCCCCAGCACTACCCAAGCCGCCTCCAGGTAGCAGCCACAGCCAGGAGCACACAGAC AGAAGACTGTGTCATGGGTCATGGCCCCTCCGCACACCTACAGGTTTGCCAAAGGAAAAGCCTGGCTCTGTTAGG CACCCAGGAGCCCCAGGTCGGCGGGTGTTCCCAGGAAGAGGAAGTAAATCTGCAACCCTGGGGAGGACCCCAACT GGACATGTACTGCCTCTCATCTAGAATTTATTTTCCTAGCACTTCACCACCTCCTTCATCTTCTCCTTCAACAAT

TTGGAGGACTTCCGGGTCAAGACCTGCGGGGGCGCCACCGTGACCATTGTCAGTGGCCTTCTCATGCTGCTACTG TTCCTGTCCGAGCTGCAGTATTACCTCACCACGGAGGTGCATCCTGAGCTCTACGTGGACAAGTCGCGGGGAGAT AAACTGAAGATCAACATCGATGTACTTTTTCCGCACATGCCTTGTGCCTATCTGAGTATTGATGCCATGGATGTG GCCGGAGAACAGCTGGATGTGGAACACCTGTTCAAGCAACGACTAGATAAAGATGGCATCCCCGTGAGC TCAGAGGCTGAGCGGCATGAGCTTGGGAAAGTCGAGGTGACGGTGTTTGACCCTGACTCCCTGGACCCTGATCGC TGTGAGAGCTGCTATGGTGCTGAGGCAGAAGATATCAAGTGCTGTAACACCTGTGAAGATGTGCGGGAGGCATAT CGCCGTAGAGGCTGGGCCTTCAAGAACCCAGATACTATTGAGCAGTGCCGGCGAGAGGGCTTCAGCCAGAAGATG CAGGAGCAGAAGAATGAAGGCTGCCAGGTGTATGGCTTCTTGGAAGTCAATAAGGTGGCCGGAAACTTCCACTTT GCCCCTGGGAAGAGCTTCCAGCAGTCCCATGTGCACGTCCATGACTTGCAGAGCTTTGGCCTTGACAACATCAAC ATGACCCACTACATCCAGCACCTGTCATTTGGGGAGGACTATCCAGGCATTGTGAACCCCCTGGACCACCAAT GTCACTGCGCCCCAAGCCTCCATGATGTTCCAGTACTTTGTGAAGGTGGTGCCCACTGTGTACATGAAGGTGGAC GGAGAGGTACTGAGGACAAATCAGTTCTCTGTGACCAGACATGAGAAGGTTGCCAATGGGCTGTTGGGCGACCAA GGCCTTCCCGGAGTCTTCGTCCTCTATGAGCTCTCGCCCATGATGGTGAAGCTGACGGAGAAGCACAGGTCCTTC ACCCACTTCCTGACAGGTGTGTGCGCCATCATTGGGGGCCATGTTCACAGTGGCTGGACTCATCGATTCGCTCATC TACCACTCAGCACGAGCCATCCAGAAGAAAATTGATCTAGGGAAGACAACG<u>TAG</u>TCACCCTCGGTGCTTCCTCTG

MEALGKLKQFDAYPKTLEDFRVKTCGGATVTIVSGLLMLLFLSELQYYLTTEVHPELYVDKSRGDKLKINIDVL FPHMPCAYLSIDAMDVAGEQQLDVEHNLFKQRLDKDGIPVSSEAERHELGKVEVTVFDPDSLDPDRCESCYGAEA EDIKCCNTCEDVREAYRRGWAFKNPDTIEQCRREGFSQKMQEQKNEGCQVYGFLEVNKVAGNFHFAPGKSFQQS HVHVHDLQSFGLDNINMTHYIQHLSFGEDYPGIVNPLDHTNVTAPQASMMFQYFVKVVPTVYMKVDGEVLRTNQF SVTRHEKVANGLLGDQGLPGVFVLYELSPMMVKLTEKHRSFTHFLTGVCAIIGGMFTVAGLIDSLIYHSARAIQK KIDLGKTT

ACCAGGCAAATATTCCATTCAGCATTACAAAGATGGATGTTCTTCAGTTCCTAGAAGGAATCCCAGTGGATGAAA ATGCTGTACATGTTCTTGTTGATAACAATGGGCAAGGTCTAGGACAGGCATTGGTTCAGTTTAAAAATGAAGATG ATGCACATGCCCACTGCGTGACCTTGGTTCAGCTGTCCATTTCCTGTGACCATCTCATTGACAAGGACATCGGC TCCAAGTCTGACCCACTCTGCGTCCTTTTACAGGATGTGGGAGGGGGGCAGCTGGGCTGAGCTTGGCCGGACTGAA CGGGTGCGGAACTGCTCAAGCCCTGAGTTCTCCAAGACTCTACAGCTTGAGTACCGCTTTGAGACAGTCCAGAAG CTACGCTTTGGAATCTATGACATAGACAACAAGACGCCAGAGCTGAGGGATGATGACTTCCTAGGGGGTGCTGAG TGTTCCCTAGGACAGATTGTGTCCAGCCAGGTACTGACTCTCCCCTTGATGCTGAAGCCTGGAAAACCTGCTGGG CGGGGGACCATCACGGTCTCAGCTCAGGAATTAAAGGACAATCGTGTAGTAACCATGGAGGTAGAGGCCAGAAAC CTAGATAAGAAGGACTTCCTGGGAAAATCAGATCCATTTCTGGAGTTCTTCCGCCAGGGTGATGGGAAATGGCAC CTGGTGTACAGATCTGAGGTCATCAAGAACAACCTGAACCCTACATGGAAGCGTTTCTCAGTCCCCGTTCAGCAT TTCTGTGGTGGGAACCCCAGCACACCCATCCAGGTGCAATGCTCCGATTATGACAGTGACGGGTCACATGATCTC CAGCAGAAAAAGAAAAGCTACAAGAACTCTGGAACTATCCGTGTCAAGATTTGTCGGGTAGAAACAGAGTACTCC TTTCTGGACTATGTGATGGGAGGCTGTCAGATCAACTTCACTGTGGGCGTGGACTTCACTGGCTCCAATGGAGAC CCCTCCTCACCTGACTCCCTACACTGAGTCCAACAGGGGTCAATGAGTACCTGATGGCACTGTGGAGTGTG GGCAGCGTGGTTCAGGACTATGACTCAGACAAGCTGTTCCCTGCATTTGGATTTGGGGCCCAGGTTCCCCCTGAC TGGCAGGTCTCGCATGAATTTGCCTTGAATTTCAACCCCAGTAACCCCTACTGTGCAGGCATCCAGGGCATTGTG GATGCCTACCGCCAAGCCCTGCCCCAAGTTCGCCTCTATGGCCCTACCAACTTTGCACCCATCATCAACCATGTG GCTGTGACGGATGTGGAAGCCACACGTGAGGCTGTGGTGCCTCGAACCTGCCCATGTCAGTGATCATTGTG GGTGTGGTGGTGCTGACTTTGAGGCCATGGAGCAGCTGGACGCTGATGGTGGACCCCTGCATACACGTTCTGGG CAGGCTGCCGCGACATTGTGCAGTTTGTACCCTACCGCGGTTCCAGAATGCCCCTCGGGAGGCATTGGCA CAGACCGTGCTCGCAGAAGTGCCCACACAACTGGTCTCATACTTCAGGGCCCAGGGTTGGGCCCCGCTCAAGCCA $\tt CTTCCACCCTCAGCCAAGGATCCTGCACAGGCCCCCAGGCC\underline{TAG}GTTCCCTTGGAGGCTGTGGCAAGTCCTCAA$ TTGATACTTTTATACTTGTTTCTGCTTTTGCTGCTCTTGATCCCACCTTTGCTCCTGACAACCCTCATTCAATAA AGACCAGTGAAGACCAAAAAAAAAAAAAAAAAAA

MAHCVTLVQLSISCDHLIDKDIGSKSDPLCVLLQDVGGGSWAELGRTERVRNCSSPEFSKTLQLEYRFETVQKLR
FGIYDIDNKTPELRDDDFLGGAECSLGQIVSSQVLTLPLMLKPGKPAGRGTITVSAQELKDNRVVTMEVEARNLD
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PSAKDPAQAPQA

 ${\tt MAATEPILAATGSPAAVPPEKLEGAGSSSAPERNCVGSSLPEASPPAPEPSSPNAAVPEAIPTPRAAASAALELPLGPAPVSVAPQAEAEARSTPGPAGSRLGPETFRQRFRQFRYQDAAGPREAFRQLRELSRQWLRPDIRTKEQIVEMLVQEQLLAILPEAARARRIRRRTDVRITG$

CTTTTTCCTTTCCTGATTCCTTGTGTATGTGTGGCTGGGCCGCCCCTCTTCTCGGCTCAGAGTCACGGAGTGCCT TGAACTAGGCCCACCTCGCCGGGGCGGCTGGTTCTCTGTTTGTGGGACGCTGGTTCTCTGGAGGCCCTTCCTGA GAAGCCGTCGCCAGAGTTACGTCGCGGTTTTCTTAACTTTAGAGCCTGGGGGCCCGGAGACCCTGATTGCACTCGA GGCCCCATGCCTGCCGTGCAGATGGATCCTGAGCTAGCCAAGCGCCTCTTCTTTGAAGGGGCCACTGTGGTCATC CTGAACATGCCCAAGGGAACAGAGTTTGGGATTGACTATAACTCCTGGGAGGTCGGGCCCAAGTTCCGGGGCGTG CGTATGGGTTTCTTCCTTAGCCTGCACCAGCGGGGGCTGACAGTGCTGCGCTGGAGCACACTCAGGGAAGAGGTA GACCTGTCCCCAGCCCCAGAGTCTGAGGTGGAGGCCATGAGGGCCAACCTCCAGGAGCTGGACCAGTTCCTGGGG CAGCCCGAGAATCGACAGATCTGTGCCTTTTCCGATGTGCTACCTGTGCTCTCCATGAAGCACCCAAGGACCGC GTGGGGCAGAATCTACCCCGCTGTGGCATTGAGTGCAAAAGCTACCAAGAGGGCCTGGCCCGGCTACCAGAGATG AAGCCCAGAGCCGGGACAGAGATCCGCTTCTCAGAGCTGCCCACGCAGATGTTCCCAGAGGGTGCCACGCCAGCT GAGATAACCAAGCACAGCATGGACCTGAGCTATGCCCTGGAGACTGTGCTCAACAAGCAGTTCCCCAGCAGCCCC CAGGATGTGCTTGGTGAACTCCAGTTTGCTTTTGTGTGCTTCCTGCTGGGGAATGTGTACGAGGCATTTGAGCAT TGGAAGCGGCTCCTGAACCTCCTGTGCCGGTCAGAAGCAGCCATGATGAAGCACCACACCCTCTACATCAACCTC ATCTCCATCCTGTACCACCAGCTTGGTGAGATCCCCGCTGACTTCTTCGTAGACATTGTCTCCCAAGACAACTTC GAAAAGTTCCAAGCTCACCTGACCAAGAAGTTCCGGTGGGACTTTGCTGCGGAACCTGAGGACTGTGCCCCGGTG GTGGTGGAGCTCCCTGAGGGCATCGAGATGGGCTAACTCGGGGAGCGCTCTCAGCTGCGAGGGGCCCCTTCCCAC AGGGCTGCAGTCCTGGCCTCTCCATTTACTTCTTCCCATCCTGGGACCTGCCAGGGCAGCAATCTCTCCAGGTCC TGCAAAGATGGAGCCAGAATTCCCTTTTTCACTGATAAATATATTTCTTCATTGCCAAAGAGGCTGTACCCATCC TGAAGGCACATTTGTGGGTTCCCCATCAGCCAGGCCTTGGTGCTAACCTGGCTGAATTTCACACAGGCTCTTACA CACACGCTCCTAGGAGACATCTGCCTACACGGCAACCATATTTCCTCTGAATGAGAAGGAATTGAACCAAAAG TCCAAGAAAGAACTGATTGCTTGTTCCATAGGAGCTTAGGAAACAAGAAACCCTGGATTGCCCAGGGGGTCTGAG AAGTTGGTTGGTGACTTTTTTTGCGGTTAAATGAAGGGTGATGGGGAGATCAGCCCGAATTGCCGCCTCTT GCTAAATAGGAGCAGAGGACTTGGCCTGCAGCTCCTTGGGAGCCCTTGATTGGGAAGAGAGTTTCAAGGGAGGCA GCTGGATTCAATCTAGCAGGTGGTCAGCTTCAGCTTTCTCCATCGAAATCCCATTCTCCTGTCCAGAGGCCCAGT GGGTCATCTCCCAAGGTGGGTGTGGACCCTGGCCTCAGAGGCCTTGCTGGTGCTGTCACCTCCCACCTGTTCCAT TCCGAGGCCTCACCCAGAAGTGGGACCCTCCCCTTCCTCACCAGAGCCACCGTGACTGTTTCTGATGACCTGGAG AGTCAACAACCAGAAAGGTTTCTGCCCAGAGCAGGCTTCTTAAGGCCTTTACGAAGTTTTGTGCCTTCCAAG CTGGTTCCTCGGGAGTCCTTCGTGCTGTGGCAGGGTTCCTCTAGACAAGTACACAGGCCCTGCCACCCTGA CATCAAACTGTTGTACTATGATCACAGTCCCTGTGCCATCCTTTTCCAAGACTGGGGCTCACACCATGTTTTTGA ATGAGAATCCCTGCTGGTTGAGACTTTTGCTTCCACTTGTTTCCTTGGAGATGTTTTTCCAAGAGCATAATGTAC

MAAVQMDPELAKRLFFEGATVVILNMPKGTEFGIDYNSWEVGPKFRGVKMIPPGIHFLHYSSVDKANPKEVGPRM GFFLSLHQRGLTVLRWSTLREEVDLSPAPESEVEAMRANLQELDQFLGPYPYATLKKWISLTNFISEATVEKLQP ENRQICAFSDVLPVLSMKHTKDRVGQNLPRCGIECKSYQEGLARLPEMKPRAGTEIRFSELPTQMFPEGATPAEI TKHSMDLSYALETVLNKQFPSSPQDVLGELQFAFVCFLLGNVYEAFEHWKRLLNLLCRSEAAMMKHHTLYINLIS ILYHQLGEIPADFFVDIVSQDNFLTSTLQVFFSSACSIAVDATLRKKAEKFQAHLTKKFRWDFAAEPEDCAPVVV ELPEGIEMG

MSSKRAKAKTTKKRPQRATSNVFAMFDQSQIQEFKEAFNMIDQNRDGFIDKEDLHDMLASLGKNPTDEYLEGMMS EAPGPINFTMFLTMFGEKLNGTDPEDVIRNAFACFDEEASGFIHEDHLRELLTTMGDRFTDEEVDEMYREAPIDK KGNFNYVEFTRILKHGAKDKDD

GAGGGCGCGGGGGGAGAGAGGGGATCTGACGTCAGGCCGCGAGGTGCTTTCCAGCCGCGAGCTGTCAGGCCGAG TGTCAGGCCGGGCAGGTTTACCCAAGGTCCAGCCTAGCCCCTAGGCACCATGTCGGACAGTGATCTAGGTGAGGA CGAAGGCCTCCTCTCCCTGGCGGGCAAAAGGAAGCGCAGGGGGAACCTGCCCAAGGAGTCGGTGAAGATCCTCCG GGACTGGCTGTACTTGCACCGCTACAACGCCTACCCCTCAGAGCAGAAGCTGAGCCTTTCTGGACAGACCAA CCTGTCAGTGCTGCAAATATGTAACTGGTTCATCAATGCCCGGCGGCGGCTTCTCCCAGACATGCTTCGGAAGGA TGGCAAAGACCCTAATCAGTTTACCATTTCCCGCCGCGGGGGTAAGGCCTCAGATGTGGCCCTCCCCCGTGGCAG TCACTCAGGCCAGGGGGAAAAGCCAGCAGCCCCTTTCCCACGTGGGGAGCTGGAGTCTCCCAAGCCCCTGGTGAC CCCTGGTAGCACACTTACTCTGCTGACCAGGGCTGAGGCTGGAAGCCCCACAGGTGGACTCTTCAACACGCCACC ACCCACACCCCCAGAGCAGGACAAAGAGGACTTCAGCAGCTTCCAGCTGCTGGTGGAGGTGGCGCTACAGAGGGC TGCTGAGATGGAGCTTCAGAAGCAGCAGGACCCATCACTCCCATTACTGCACACTCCCATCCCTTTAGTCTCTGA CTTTCATACAGAGGGTTTTCTATGGATCACTGCCAAACATTGGGATCATCTCCTCTGTCCAGAGGTCTTCAACAG GAAGATGCCAGCTGGCACCACTGCACTGTGATGGGGGCCCTCTCCTCTGCTGACTCTGCCGTTTCTCCAGGCCTC CGCTCAGTGATGAGACCAAGAGTCGGAGACAAGCATGGTGCTGCTGCTTCTGCTGCTTCTCCAGAAAATCCCTG GGACACCTTTGTTCCAGCCTGGTTTCCTGGGCTGGGCTCAGGAAAGCTGCCAAATTCAGTCCTATGTTGGGTCCA AGCTGCCCCTGTGCTGTTTCTGTCAAGCCAGGTGTGGACATTCCAAGTTCATATGCGTGAACAAAAGAAAAGAAGA AACCCAGTGGATGTAACAGAACCGACTCCAGTTGAATGTTTAGATTTTTGCTAAACTGTTTTCTTTTTCCCTTTT TTGCTGTGGTTTGCATTCACGGCAGTAGTTAGCCCAGGTGTGGGGAACGAGAGTGCACTGCATGATAGCGTTCTG GTGAGCTGGGAAGGACCCACCACTGCCACTGAGGATTGTTTTGGAAGAAAGGAATATTTTTATCTTGGGGACCAG **AAAAAAAAAAAAAACAACCGTATGAGCGCATTGGCTTGTCTGCCGCAGGCACAGAAGGGTAGAAAGCCACAGCAG** GGGGCAGTCCAGCAGACTCTGACTCAACTTTCTAGGCACCTAGCAGAGAAAGATAAGATCAAAAAGGTGTTTGGTT TTCTTTTTTTTTTTTTTTTTTCCCTTTGTTCTTGAACACTTTTGCCCTGCAGCCTCAGTTTTGAATTCTTTT AGCAACTTGGATTAGAGGGGCCCATATGTCAGAAGCTCCCAGCACCTCCTACTTGGGAGAAAAGTGAGCCATCTG CTGGTCAGGAAGTCCTCCAGAGAGGCAGCTTTTCCCACAATGGTGGCAGGAAACTTTGGGGAAAGCAGGAATGGT GTCCACTGCTGCGGAGGAACTGCCTTCAGAGAAGGTGGGGCTGGAAAAGGGTTAGAAGCCTCCTAGCTGGGATTG TCTTTGTTTCACCTTTCTTTAAATTAGAATTACAGAAGCCCCTGCCCAGTGAACAGATAACGATTGGTCTTATGC GAGTCATGCTCTGTCACCCGGGCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGTAACCTCCGGCCTCCCGGGTTC AAGCAATTATTTGCCTCAGCCTCCCGAGTAGCTGGGATTATAGGCACCCGCCACCATGTCTGGCTTTTAGTAGAG ACGGGGTTTCACCATCTTGGCCAGGCTGGTCTTGGAACTCCTGACCTCGTGAGCCACCACGCCCAGCCTCTTTTG CTGTTTCATTGCTGACAGTGTTCAACAATATGCCCCATCTTTATATATCCTAAGAAACACTAATCCTAGGTTATT GAGAAAGACAGTAACATGTGTTCTGTACTTTCTGGGAAGATCCCTGAAGCCATCACAGAGGCTCCCCAACTTCTG AGTCGCCCATCTGTTGCTGTGGGAGTGTGAACGGATCGCTGAAGGAGGAGGAGCTTTGCTCTCTAGGTGGGCA TCAGGGATCCTCACCCTCCTGAGGCCCAGTGGGGAAGAATGAACATGGCTTCATCCAGGTTAACTGATGCTGCCA TTTGCCCAGCCTCTTCCATCCCAGCCCTGTCAGTGAGCCCAGGTCTGGTGCAACTGCTGCAGGATGCCTGTAGTA GGGAGCCATGCTGCTGAATTCTGGTTGGCATTTCCCCATTATGTAAAATGGGGTGTTGGGTAGGGCAGACTCTGC TTGGGTTTGGTTGTAAGATAAACCTGGAGGAGAAGCACAGTTGTCCCATTGAATTATTTGAGCAAAAACTACTGT

AGAGTTTCGGAGGCGGTGACCGTGACGTAGAAGGTGGAGACCGCTTCACCCTGATCAGGGAGTATCGGCTGCGGG TGCGCAAGGCGTCCAGGAGTGACCTGGGGCTGTGGAGAGCGACCCGTGGCCTTGTGTTTCAGAGTTTACCACCTA GGATGACTTCAGTGACTAGATCAGAGATCATAGATGAAAAAGGACCAGTGATGTCTAAGACTCATCAAT TGGAATCAAGTCTCAGTCCTGTGGAAGTGTTTGCTAAAACAATCTGCCAGTTATCAAGACAGGAGGCAATCCTGG CGGCGAGCAAGTATGAAAGAAACGAACCGGCGGAAGTCGCTGCATCCCATTCACCAGGGCATCACAGAGCTCAGC CGGTCTATCAGTGTCGATTTAGCAGAAAGCAAACGGCTTGGCTGTCTCCTGCTTTCCAGTTTCCAGTTCTCTATT CAGAAACTTGAACCTTTCCTAAGGGACACTAAGGGCTTCAGTCTTGAAAGTTTTAGAGCCAAAGCATCTTCTCTT TCTGAAGAATTGAAACATTTTGCAGACGGACTGGAAACTGATGGAACTCTACAAAAATGTTTTGAAGATTCAAAT GGAAAAGCATCAGATTTTTCTTTGGAAGCATCTGTGGCTGAGATGAAGGAATACATAACAAAGTTTTCTTTAGAA CGTCAGACTTGGGATCAGCTCTTGCTTCACTACCAGCAGGAGGCTAAAGAGATATTGTCCAGAGGATCAACTGAG GCCAAAATTACTGAGGTCAAAGTGGAACCTATGACATATCTTGGGTCTTCTCAGAATGAAGTTCTTAATACAAAA $\tt CCTGACTACCAGAAAAATTACAGAACCAGAGCAAAGTCTTTGACTGTATGGAGTTGG{\color{red}{\textbf{TGA}}}{\textbf{TGA}}{\textbf{TGGATGAACTGCAAG}}$ GATCAGTGAAACAGCTGCAGGCCTTTATGGATGAAAGTACCCAGTGCTTCCAGAAGGTGTCAGTACAGCTCGGAA AGAGAAGCATGCAACAATTAGATCCCTCACCAGCTCGAAAACTGTTGAAGCTTCAGCTACAGAACCCACCTGCCA TACATGGATCTGGATCTGGATCTTGTCAGTGACTTTATGAGAGTTTCTGCCACAAGGTGCCCAAGAGGAGAGGAA TGGGAAGAGTGCCCCAGCACGTGGTGACTGCGTGATTTCTGCTCGTTGCCTTTGAAGATAACTGGCAGGACTGAC TGTAGAACACTTTGACTTTTTCAAAAAGTGATGGAATTTGTACATCCAAATGAATATTGTATAGACAATTTTCC CAGGAATGTGCAAAATGCTTGAAAGTTCAAACTTCTTTTTTGAAATGATCTTCAGATCCAGTGGCCCATTCTTTT ATCTTTATCCTGTGAAGGTGTTTTTCAGGTTTTGAAACAATCCAAAAATCATTTAGGACCAAGTCTAAGGAAACA TTTTAGTGGCCAAGTTGGATTCCGATTGTAAAGGAATGATACTAATTTTCTAGCATGGCTCTGAAGGTGATTTTA GGTAGAAGAGTTTTGAGGCTGGGCGCAATGGCTCACGCCTGTAATCCTAGCATTTTGGGTGACTGAGGCGGGTGG ATTGCTTGAGCCCAGAAGTTGAAGACCAGCCTGAGAAATAAGGTGAAACCCTGTCTACAAAAAATACAAAAAGTT AGCTGGGTGTGGCGTGTGCCTGTAGTGCTAGCTACTCAGAAGGCTGAGGTGGGAGGATTGTTTGAGCCCAGG AGGTTGAGGCTGCAGTGAGTTCTAATTGCGCCACTGCACTCCAGCCTGAGCGACAGAGTGAGACACTGTCTTAAA AAAAATTAAAAATTGT

MIINWNQVSVLWKCLLKQSASYQDRRQSWRRASMKETNRRKSLHPIHQGITELSRSISVDLAESKRLGCLLLSSF QFSIQKLEPFLRDTKGFSLESFRAKASSLSEELKHFADGLETDGTLQKCFEDSNGKASDFSLEASVAEMKEYITK FSLERQTWDQLLLHYQQEAKEILSRGSTEAKITEVKVEPMTYLGSSQNEVLNTKPDYQKNYRTRAKSLTVWSW

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CAGGATCCCTGCTGCCTTGGTGATCCCGGGCTGACAGCCAGAGAGCACAGCGGCTCAGCTCCTGGAGAGTGAGGG TTGAAGAAAGCGGAGGGCAGCCGCCTGCGCCCGCTGGCTCCCATTAGGTCGGTTCCTGCAGCGGTGCCCGGCAGC CTTGGTGAAGGCCCTGCCCGGCAGAGATCATGTATTGCCTCCAGTGGCTGCTGCCCGTCCTCCTCATCCCCAAGC CCCTCAACCCCGCCTGTGGTTCAGCCACTCCATGTTCATGGGCTTCTACCTGCTCAGCTTCCTCCTGGAACGGA AGCCTTGCACAATTTGTGCCTTGGTTTTCCTGGCAGCCCTGTTCCTTATCTGCTATAGCTGCTGGGGAAACTGTT TCCTGTACCACTGCTCCGATTCCCCGCTTCCAGAATCGGCGCATGATCCCGGCGTTGTGGGCACC<u>TAA</u>CGGCCTG CCCTGTTAGCTTTCCAAGGAAGCAGAAGACGGGAGGGGAGGCATTGACATAGGTCATAAAGCATTGGAGTTTCAA ATCCCGCAGCCTCGCGGGTGTCACATTCCTGACGGCGCCTTTTTTGGCCTGTGATGTTTTATCCTTACAATGTGAA CCATCTAGGTCCTGGCTGGCCGCATGACCACCCCTCTCGCCTCATTACTGTGAGGAGTCTGGGTCCATCCTGGTC AGCTGCCCCAATGTGACCTGGGGCAGATAAAATGCCAGTCTCATTGTCACCTCTGTGACCCCTCCTTGTCAGGGT CTCCTTCCTTCCCAGAATGTTACTGACTCCTCAGTCCCTCTTCTGGTTTCCCTTTATTTCTCTTCTACCCTTTTC CTTTTTTGGGGAGTACCTGTCCAAGACAGGGCTCATTTTTGCACTTATCTCGAATTTGAAGAGATTGCTGACGCC CGAGAGCCTCGCTTTTTCATCCTTCTTTCCTTGTTCAGCAGGCTAGACAGAAACATGTCTTGACTGTTAGTTGTC TGTCTGGGCTCAAGCTTTCCCGCCCAGCCTCACTTCCTTTGCCCTTCCTCCTGCCTTTCTCAACTGTCCCAAGGA GGGGGCCTCATTGTGTCTCCCGTGCATGCTCTGCAGCATTGAAGTATGGTGTGTTCACGTAGTTCTAGCAGTCCC CAGCTGAGTGAGTGGGAGAGTACCTGTGTGTTTCGTAACGGCCTTGATCCCCTTGATAGATGTTTGGATATTTTT TGGTGTGCCCTGTGTGTGTGTGTGTACAAATACATGTGTATATTCCTTTTAAAGAAGCTTTATCGAACGTGGT AGAGTGACCAGCACACTGGACTCCGAGGTGGTTCAGACAAGACAGAGGGGGAGCAGTGGCCATCATCCTCCCGCCA GGAGCTTCTTCGTTCCTGCGCATATAGACTGTACGTTATGAAGAATACCCAGGAAGACTTTGTGACTGTCACTTG ATGCCTGTCCTTTCAGTCTGATCCATCCTCTCTCTCTCTGAGGGGAAAGAGAGATGGGCCAGGCAGAGAAC AGAACTGGAGGCAGTCCATCTAGGGAATGGGACTGTGAGGCCATACTTGTGAAACGTCTGGACTGCTATTCTAGA AAAAA

 $\verb|MYCLQWLLPVLLIPKPLNPALWFSHSMFMGFYLLSFLLERKPCTICALVFLAALFLICYSCWGNCFLYHCSDSPLPESAHDPGVVGT|$

GGCTGAACTGCTCATCATCGGCTGGTACATCTTCCGCGTGCTGCAGGTGTTCCTGGAATGCTGCATTTACTG GGTAGGATTCGCTTTTCGAAATCCTCCAGGGACACAGCCCATTGCGAGAAGTGAGGTGTTCAGGTACTCCCTGCA GAAGCTGGCATACACGGTGTCGCGGACCGGGCGGCAGGTGTTGGGGGAGCGCAGCAGCAGCCCCCAACTGAGG $\verb|CCCAGCTCCCAGCCCTGGGCGGCCGTATCATCAGGTGCTCCTGTGCATCTCGGCCAGCACGGGAGCCAGTGCCG|$ $\tt CGCAGGAATGTGGGGTCCCCTGTGTTCCCTCGCCAGAGGAGCACTTGGCAAGGTCAGTGAGGGGCCAGTAGACCC$ CCGGAGAAGCAGTACCGACAATGACGAAGATACCAGATCCCTTCCCAACCCCTTTGCACCGGTCCCACTAAGGGG ACAAAGTCGGGACAGCACCATCCCAGCCCCGAAGCCAGGGCCATGCCAGCAGGCCCCACCATGGAAATCAAAACA CCGCACCAGCAGCAGAATGGACATTCTGACATCGCCAGCCGACGCCCTGAATCTTGGTGCAGCACCAACCGCGT ${\tt GCCTGTGTGGCGGGACTGGAGGGCACAGTTGAGGAAGGAGGGTGGTTAAGAAATACAGTGGGGCCCTCTCGCTGT}$ $\verb|CCCTTGCCCAGGGCACTTGCATTCCAGCCTCGCTGCATTTGCTCTCTCGATTCCCCTTTCCTCCTCACTGCCTCC|\\$ CAAGCCCACCCTACTCCAAAATAATGTGTCACTTGATTTGGAACTATTCAAGCAGTAAAAGTAAATGAATCCCAC CTTTACTAAAACACTTTCTCTGAACCCCCCTTGCCCCTCACTGATCTTGCTTTTCCCTGGTCTCATGCAGTTGTG GTCAATATTGTGGTAATCGCTAATTGTACTGATTGTTTAAGTGTGCATTAGTTGTGTCTCCCCAGCTAGATTGTA AGCTCCTGGAGGACAGGGACCACCTCTACAAAAAATAAAAAAGTACCTCCCCTGTCTCGCACAGTGTCCCAGGA CCCTGCGGTGCAGTAGAGGCGCACC

GGGGAXGGGGGGCAGTGTGGCTGGAGCCGCGCTGACGGGCCCGCGGTCTGGGCGTGAGTGCAGGGAAGTGGAGT GGAAGAGGAGGAGGAGCCATTGGATGAAAGCTCAGTGAAGAAAATGATCCTCACATTTGAAAAAGAGATCATA TAAAAACCAAGAATTGCGGATTAAGTTTCCAGACAATCCAGAGAAGTTCATGGAATCCGAGCTGGACCTAAATGA CATCATTCAGGAGATGCACGTGGTGGCCACCATGCCAGACCTGTACCACCTTCTGGTGGAGCTGAATGCTGTACA GTCGCTTCTCGGCTTGCTCGGACACGATAATACAGATGTGTCCATAGCTGTGGTCGATTTGCTTCAGGAATTAAC AGATATAGACACCCTCCATGAGAGTGAAGAGGGAGCAGAAGTGCTCATCGATGCTCTGGTGGATGGGCAGGTGGT AGCACTGCTGGTACAGAATCTGGAGCGCCTGGATGAGTCTGTGAAAGAGGAGGCAGATGGCGTCCACAACACTCT GGCTATTGTGGAAAACATGGCTGAGTTCCGGCCTGAGATGTGTACAGAGGGTGCCCAGCAGGGTCTTCTACAGTG GCTGTTGAAGAGGCTGAAGGCAAAGATGCCTTTTGATGCCAACAAACTGTATTGCAGTGAAGTGCTGGCCATATT CGTGTTTAAAAGACACAATCCCAGCACGGCTGAGGAGCAGGAGATGATGGAGAATCTGTTTGATTCCCTCTGCTC CTGTCTAATGCTTAGTTCCAATCGTGAGCGCTTCCTGAAGGGCGAGGGTCTTCAGCTGATGAATCTCATGCTCAG GGAAAAGAAGATCTCCCGGAGCAGTGCCCTGAAAGTGCTGGACCATGCCATGATTGGCCCCGAAGGCACAAAAGAACAA CTGCCATAAGTTTGTTGACATTCTTGGCTTACGAACCATCTTTCCCCTCTTTATGAAATCTCCCAGGAAGATCAA GAAAGTGGGAACCACTGAGAAGGAACATGAAGAGCATGTCTGTTCGATCCTGGCTTCCCTCCTGCGGAACCTGAG AGGGCAGCAGCGGACCCGGCTTCTGAATAAATTCACTGAAAATGACAGTGAGAAGGTTGACAGACTAATGGAGTT GCATTTTAAATATCTGGGTGCAATGCAGGTGGCGGACAAGAAGATTGAAGGGGGAAAAACACGACATGGTCCGGCG AGGAGAGATCATCGACAATGACACCGAGGAGGAGTTCTACCTCCGGCGCCTGGATGCGGGGCTCTTTGTTCTCCA GCACATCTGCTACATCATGGCCGAGATCTGCAATGCCCAGTTCCCCCAGATTCGCCAGAGGGTTCACCAGATCCT AAACATGCGAGGAAGCTCCATCAAAATTGTCAGGCATATCATCAAGGAGTATGCAGAGAACATCGGGGACGGCCG ${\tt GAGCCCGGAGTTCCGGGAGAACGAGCAAAAGCGCATCCTGGGCTTGCTGGAGAACTTC} \underline{{\tt TAG}} {\tt AGGCACCTTGGCCC}$ TGCGCATCATGGACTCTCTCAGCTTCCCTCCCAGGATCAGTTTCTACACAACTCTGTGTGGGCTTTTGGACAAATT AAAGCTAGTTTTGGTAAAAAAAAA

MDVGELLSYQPNRGTKRPRDDEEEEQKMRRKQTGTRERGRYREEEMTVVEEADDDKKRLLQIIDRDGEEEEEEE PLDESSVKKMILTFEKRSYKNQELRIKFPDNPEKFMESELDLNDIIQEMHVVATMPDLYHLLVELNAVQSLLGLL GHDNTDVSIAVVDLLQELTDIDTLHESEEGAEVLIDALVDGQVVALLVQNLERLDESVKEEADGVHNTLAIVENM AEFRPEMCTEGAQQGLLQWLLKRLKAKMPFDANKLYCSEVLAILLQDNDENRELLGELDGIDVLLQQLSVFKRHN PSTAEEQEMMENLFDSLCSCLMLSSNRERFLKGEGLQLMNLMLREKKISRSSALKVLDHAMIGPEGTDNCHKFVD ILGLRTIFPLFMKSPRKIKKVGTTEKEHEEHVCSILASLLRNLRGQQRTRLLNKFTENDSEKVDRLMELHFKYLG AMQVADKKIEGEKHDMVRRGEIIDNDTEEEFYLRRLDAGLFVLQHICYIMAEICNANVPQIRQRVHQILNMRGSSIKIVRHIIKEYAENIGDGRSPEFRENEQKRILGLLENF

TCCCAGGTCGCCGCCTTCCCGCGGGGCCCCGCCCCCCAAAGCGGGCTATAAGTTAGCGCCGCTCTC CGCCTCGGCAGTGCCAGCCGCCAGTGGTCGCACTTGGAGGGTCTCGCCGCCAGTGGAAGGAGCCACCGCCCCCGC CCGACCATGGCCGAGGAGCTGGTCTTAGAGAGGTGTGATCTGGAGCTGGAGACCAATGGCCGAGACCACCACACG GCCGACCTGTGCCGGGAGAAGCTGGTGGTGCGACGGGGCCAGCCCTTCTGGCTGACCCTGCACTTTGAGGGCCGC AACTACGAGGCCAGTGTAGACAGTCTCACCTTCAGTGTCGTGACCGGCCCAGCCCCTAGCCAGGAGGCCGGGACC AAGGCCCGTTTTCCACTAAGAGATGCTGTGGAGGAGGGTGACTGGACAGCCACCGTGGTGGACCAGCAAGACTGC ACCCTCTCGCTGCAGCTCACCACCCCGGCCAACGCCCCATCGGCCTGTATCGCCTCAGCCTGGAGGCCTCCACT GGCTACCAGGGATCCAGCTTTGTGCTGGGCCACTTCATTTTGCTCTTCAACGCCTGGTGCCCAGCGGATGCTGTG TACCTGGACTCGGAAGAGGAGCGGCAGGAGTATGTCCTCACCCAGCAGGGCTTTATCTACCAGGGCTCGGCCAAG TTCATCAAGAACATACCTTGGAATTTTGGGCAGTTTGAAGATGGGATCCTAGACATCTGCCTGATCCTTCTAGAT GTCAACCCCAAGTTCCTGAAGAACGCCGGCCGTGACTGCTCCCGCCGCAGCAGCCCCGTCTACGTGGGCCGGGTG GTGAGTGGCATGGTCAACTGCAACGATGACCAGGGTGTGCTGCTGGGACGCTGGGACAACAACTACGGGGACGGC GTCAGCCCCATGTCCTGGATCGGCAGCGTGGACATCCTGCGGCGCTGGAAGAACCACGGCTGCCAGCGCGTCAAG TATGGCCAGTGCTGGGTCTTCGCCGCCGTGGCCTGCACAGTGCTGAGGTGCCTGGGCATCCCTACCCGCGTCGTG ACCAACTACAACTCGGCCCATGACCAGAACAGCAACCTTCTCATCGAGTACTTCCGCAATGAGTTTGGGGAGATC CAGGGTGACAAGAGCGAGATGATCTGGAACTTCCACTGCTGGGTGGAGTCGTGGATGACCAGGCCGGACCTGCAG GTTCCAGTTCGTGCCATCAAGGAGGGCGACCTGAGCACCAAGTACGATGCGCCCTTTGTCTTTGCGGAGGTCAAT GCCGACGTGGTAGACTGGATCCAGCAGGACGATGGGTCTGTGCACAAATCCATCAACCGTTCCCTGATCGTTGGG CTGAAGATCAGCACTAAGAGCGTGGGCCGAGACGAGCGGGGGGATATCACCCACACCTACAAATACCCAGAGGGG TCCTCAGAGGAGGGGGGGCCTTCACAAGGGCGAACCACCTGAACAACTGGCCGAGAAGGAGGAGACAGGGATG GCCATGCGGATCCGTGTGGGCCAGAGCATGAACATGGGCAGTGACTTTGACGTCTTTGCCCACATCACCAACAAC ACCGCTGAGGAGTACGTCTGCCGCCTCCTGCTCTGTGCCCGCACCGTCAGCTACAATGGGATCTTGGGGCCCGAG TGTGGCACCAAGTACCTGCACCTCAACCTGGAGCCTTTCTCTGAGAAGAGCGTTCCTCTTTGCATCCTCTAT GAGAAATACCGTGACTGCCTTACGGAGTCCAACCTCATCAAGGTGCGGGCCCTCCTCGTGGAGCCAGTTATCAAC AGCTACCTGCTGGCTGAGAGGGACCTCTACCTGGAGAATCCAGAAATCAAGATCCGGATCCTTGGGGAGCCCAAG CAGAAACGCAAGCTGGTGGCTGAGGTGTCCCTGCAGAACCCGCTCCCTGTGGCCCTGGAAGGCTGCACCTTCACT AAGGTGAGAATGGACCTGCTGCCGCTCCACATGGGCCTCCACAAGCTGGTGATACTTCGAGAGCGACAAGCTG AAGGCTGTGAAGGGCTTCCGGAATGTCATCATTGGCCCCGCCTAAGGGACCCCTGCTCCCAGCCTGCTGAGAGCC CCCACCTTGATCCCAATCCTTATCCCAAGCTAGTGAGCAAAATATGCCCCTTCTTGGGCCCCAGACCCCAGGGCA GGGTGGGCAGCCTATGGGGGCTCTCGGAAATGGAATGTGCCCCTGGCCCATCTCAGCCTCCTGAGCCTGTGGGTC CCCACTCACCCCTTTGCTGTGAGGAATGCTCTGTGCCAGAAACAGTGGGAGCCCTGACCTTGGCTGACTGGGGG ATTGTTTGATCTACTTCATAGCTCCTTGGAGCAGGCAAAAAAAGGGACAGCATGCCCCTTGGCTGGATCAGGGAAT CCAGCTCCCTAGACTGCATCCCGTACCTCTTCCCATGACTGCACCCAGCTCCAGGGGCCCTTGGGACAGCCAGAG CTGGGTGGGGACAGTGATAGGCCCAAGGTCCCCTCCACATCCCAGCAGCCCAAGCTTAATAGCCCTCCCCTCAA CCTCACCATTGTGAAGCACCTACTATGTGCTGGGTGCCTCCCACACTTGCTGGGGCTCACGGGGCCTCCAACCCA $\verb|CCCTCCACACCAGTGGCCTCGTGGTTATTAGCAAGGCTGGGTAATGTGAAGGCCCAAGAGCAGAGTCTGGGCCT| \\$ CTGACTCTGAGTCCACTGCTCCATTTATAACCCCAGCCTGACCTGAGACTGTCGGAGAGGCTGTCTGGGGGCCTTT TCAGGTCCCACGTCTGGCCAGGCACTGCCTTCTCCTCTCTGGGCCTTTGTTTCCTTGTTGGTCAGAGGAGTGATT GAACCAGCTCATCTCCAAGGATCCTCTCCACTCCATGTTTGCAAT

6242/6881 FIGURE **5766A**

ACCCAAGAATGGCTGGAGGCCATCAACAGTGACTTTGAGGGAAATCCCCTACACAACTGCTTGGTAGCATCAGAA AATGGGATTGCCCCTGTGCCTTGGACCAAGATAACCAGCCCAGAGTTTGTGGATGACAGACCCCAAGTAGTGAAT GCCCTCTGCCAAGCCTGGGGGCCCCTTCCATTAGAGGCACTGGATTTGAGCAGCCCTCAAGAGTTGCACCAGGCC AGCTCCCCAGACAACCAGGTGCTTCCTGCCCAGAGTTTGGCCAAGGGTAAGGGCAGGACATATGGGAGCAAGTAT CCAGGACTCATCAAGGTGGAGCAAGCCCGGTGTGGGGAGGTGGCTTTCAGGATGGACGAGGTGGTCAGCCAGGAC ACATCCAGTGGGTGTACTTCTGGGGCACTAGAGGAGATAGCTGGAACTAAGGAAACTCCCTTATTTCAAAAGATA CTGCCTCTCTCAGAGGCCAATGAAGGACCTTCCTTGGGAAATCGGGCTTGCACAAAGCCAGAAAGCTCTGAGGAG AGGCCCTATAATTTGGGCTTCAGGAGAAAGGTCAATCTTAAAGCACCCACACCCACAACTCAGAAAGGCCCCCCAA GGCTCCTACATGAATGTCCTTGAGGACGCACTGGACTGTGCCTCTGGTCTCAGGGCAGGTGTCTCACAAGAGCCA GCTGCCTCCAAGATGCAGGGACCTCTAGGAAACCCAGAGAATATGGTGCAGCTCAGGCCTGGACCAAGACAAGCC TCCTCTCCCCGCCTGTCCCCAGCTTCTCCTGCAGCTGCAGCCTCTGAAACAAAGATAGAGGTGAAGACCAAAGAG AGAAATGGGAGACTTCCCAAGCCCATGCCCTGCCCTAGCAGAAACACCTCCTCCCCTGAGCCCCCACTCCTGGG CTCAAATTCTCATTCTTGAGAGGGCAGAGGCAACCCTCTGTGACCCCGGAGAAAGCCTCACTCCAGCACAATGGG CCCTGGAAAGTCCTGTGTTCCCTCACTCTCCTAAACCCAACCGAGCCAAATCTTTGGGGAAAGCTGGAACAACT GCAGGCTCCCCAGAAAGAGGCCCCACCTGGAGGAGGAGCCCCCAGGGCCTGAGCCCAGGATTGGGGCTCTAGGT GTCAAGGTTTTCCGCTCCAGGATAGCATGCCTGCCAGGTGGCCGGGACAGGGCCGGGCCGCCCTGCTTCTGGTG ACCATCCCCAGGCCTGAAGATAAAGCCAAGGGGCTGGCGGTCCTGATTGACGCCAGGAGACAGCCCCCACAGCCC GGTCTGGTCAGCCCCTGCAGGCCACCCAGGCTCAGGTCCCAGCCTCTATCCGGGCTATTCTCTTCCTGGGGGAG AAGGAGGCGCTCTCCAGCTGCAGACATTACCTGACGTCCAGGTGGAGGTGCTGACCTCATTGAAGGCCCTCAGC CACCATGTGGACCCCAGCCAGCTGCCGCAGTCCTGGAAGGCCCCTTCCCCTACTGCCACACCGAGTGGGTTCAT TTCTTCCAGAAGCTGGACCCTTTCCTTGCTGACCTCCACCAGGCCTCTTCCCTGCTACAAGCTTCCATCGAGGAA TTCGAGAAGGCCGACCCCCTGGGGGGATGCAGGAGGCTACCAGGTGCCTGAGCAAGTCCAAGGAGCTGATGGAG GCTGTGCTGAGGGACCCCGGCCTACTGGGCCTCCAGCGGGAAGGTGGAGCCACCCTGGCCAGGCTGCAGCATGAT GCCAGCAGGCTGGACTTCAGCCCTGATGTCAGGAGCCATCTGGCTGCAGCCACTGCCTTGTACAGCCTTGTGGAC GAGCAGCTTCATGTTCTGGTCACCGCTTCCAACAGCCTCCTGGGGAAGCTGGAGCTCCGTGTCCGCCTGGGCCGC AAGGATGGAAGTTTGGAGACAGTGGAGAAAGCCCACGCAGAATTTGAGAACTTCTTCCTCCAGGCTGCAGCCCAG TACCGCCGAGGCCTGGAGCTGTCCAAGCAGGCCGCTCAGCTGGGAGCTACAGCCAGAGGGGCTGGGGAGGCAGAA ATGGCGGCCGAGCGCAACGCACCGGACCTCGAGACGCTGCTCCACCTGCACCGCTTCTGCAAGAGGATGACCTGG TTCCACATGGACTGTCAGGACCTGATGGCCCAGCTCAGGCTGGACAAGACCTCAAGGGTCAGTCCTGGGGACCAG CGCCGCCTCCACCGCTACCTGCAGCGACTGGCATCTGAGTTCCCTGAGAAGCTCGCAGCCGTGGGGCTGCAG GTGGCCTCCCTGAGCCGGCCAGGCCTGGGCCAGGAGCTATGGGAGGAGGCCCGGATCAGGCATGAGGAGATCCGG AGAGGGGTGGCAGCCAAGGGCCAGGGTGTGAGTGTAGAGGTCACTTCCAAGGGGAGGTGGGATCAGCCTCCACTA GACTCACTGGGCATGGACCATTTGCCAAAGTCCTATTGGCCTCCTGGGCCCCCCAGAGGGGAACAGAACAGAACT TTCCAGGCAGGCTCTCCACCCCAGGAAGCTGGCCAGGCTGCAGAGGCTGAAGACGGCAAAGGCTCCCACAAGCTG

6243/6881 FIGURE **5766B**

CCTGACCCTGCCCGCGAGCATTTGCTTGCCACCACCTTCTTCCGGCAGCAGCCCCCCAGGCAGAGCCAGGTCCCT $\tt CGCCTCACTGGGGGCAGCTTCTCCTCAGAGGGGACAGACTCACAGACATCCCTTGAGGACTCACCCCAGACAAGT$ $\verb|CCCCTTGCCTCCTCTAGCTGAGAGGCCCCTTCAGTCGCACCAGCCTCCAGGAGCACTGGGCCAGGGCCCAGCTG|\\$ GAGGGGTAGCTGGGAGCTCTGGTCAGTCCCAGTGAGACGTCACCATGGAGCACTGGTTTTACATTCTGCCTCTGC TGGGAGGATGAGAACTGTCGACCTGCCCCTGGCTCCAGAAAACTCCTGGAAGACCCCGATCTTCACCCATGCAGAA TAGCAAGAGTGGGCGTCAGAACCAGGGCACAATAAATGGTGTGATTGGCTCCATCCCTCCAGGCTCTCATTGTGG TACACAGCTCTCCCCTCGGGTACGAGGGCCAGTGTTGCCCTTAGGCAGAATCCTCGGGGAGATTCGGGAGTGCTT $\verb|CCTTGTCTTGGATTCCAGGAAAATGGACCCTGAGATGAGGATTTAAGGATCAGTGTTTTGGTGCTGATCCAGGA|\\$ ACCTCTGCTGGGGGAGTAGGAGGCGAATCTGCAAAGGGAATAAAGAGTATGTTGTCAAGCAAATTTTCTTTTTT TAATTTTTAAAACTTCATTGTATTTTATGTTTAGAGATGGGGCCTCACTACATTGCCCAGGCTGGTCTCAAACTC CTGGGCTCAAGTGATCCTCTTGCCTTGGCCTGCCAAAGTGCTGGGATTGCCTTTTCCGCCCACCCCCCCGACCC CACCAGAGACAGGGTCTCACTCTGGTGTCCAGGCTGGAGTGCAGTGGTGCAATCATAGCCTTAAATTCCTGGGTT CAACCAATCCTCCCACCTCAGCCTCCTAAGTAGCTGGGACTACAGTTATGCACCACCATGCTCAGCTTATTATTT CTCAGCCTCCCAAAGTGCTGGGATTATACGTATGAGCCACTGTGCCCCACCCTCATACAAATTTCCATGTTGGCA ACTGTAGCTGGATCTTTCTGGAGATCTCTGAAAGACAGCATGGAATCCTTGAACACCCCCTGAGGCGTGAGGCAT GTCTCACAAGGCCTCTTCAGCAGGCATGGGACCTTCATTCTCAAGTTCAAGGAACCCTGTGGAACCTTGTCCTTG ATGTCTTCTGTCCCCTTCCCTGCCCAACTTCCACTTCTCTATGCCCAGCCTCTGTGGCCCAGTACCATTGGGGTT CTGTGGGCAGCTGGGTCCTGGTGGGTTGGGGACCGTGGGAAGGGGCCTATCTGTCGGATCTTAGATGGAGCATCCA GAAGCCCCACCCTTCATACTGGCCAGAGTGGCCCCTGCCAGCGCCTCTCTGGAGTGTCATTAAGCTGAAAGTGTT TGCCTTACCTCTGCAGTAGGATGCATTACTGAAGTGGCCTCTTGGTCACCTAGCTCTGAATTTTCCTGGCTCCAG AGGACAACTAGGGCTTCTCAGGAGCTGTCTCAGCCAAGAGTCACACACTTGATACCTAAAATGGCTTCAGGAATC GGCTTCCTAGGGAATCCTACCCCAGACATTAAAATAGACTCTTGGTGCTGGCAGGTGGCTGGAATCTGCGTTTGT AGCCAAGTGCTCTTCCTGTGTGACTCAGCAAAGTGGGGGTGCATTTGGGGAACACCCGGGGCTGGGGCCTGAGTC GCGTTGATCAGCCCATCTCCATCCATGCCTGTTGCCTCAGAGAGGGCCGACGGCTTTTAAAATGCTGTTGCCATA GCAACAGCATCCAGCCAGTGGGTACCACAGGCAGGGAGCCACAGAAACTGGGGTGCTGGGATGGAAACTGACTTG TGAGAGACCACAGCTACTGCTAGAAGGAAGGGGGGCAAAGCGGGCACAGGTAATCTAAGAATACTTGGGCGGGAG ATCCCCTGGGGAAGAAGGGAATGCAGAAATGAAATGTCATAATGAGTAACAATGTATAAAAAATATCGAATAATAA CAGCT

MIKCLSLDLCTVDKKPVPEPAYPILFTQEWLEAINSDFEGNPLHNCLVASENGIAPVPWTKITSPEFVDDRPQVV
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ERPYNLGFRRKVNLKAPTHNSERPPQGSYMNVLEDALDCASGLRAGVSQEPAASKMQGPLGNPENMVQLRPGPRQ
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PRLTGGSFSSEGTDSQTSLEDSPQTSPLASL

AGGCCTTGAGGTTTTGGCAGCTCTGGAGGATGAGAGAGACATGGCCAGGGGCCCTTGCAACGCGCCGAGATGGG $\tt CGTCCTGATGGTGCTGGTCGCCATAGGCACCGCCGTGACAGCGGCCGTCAACCCTGGCGTCGTGGTCAGGATCT$ $\tt CCCAGAAGGGCCTGGACTACGCCAGCCAGCAGGGGACGGCCGCTCTGCAGAAGAGGACCTGAAGAGGATCAAGATTC$ $\tt CTGACTCAGACAGCTTTAAGATCAAGCATCTTGGGAAGGGGCATTATAGCTTCTACAGCATGGACATCCGTG$ AATTCCAGCTTCCCAGTTCCCAGATAAGCATGGTGCCCAATGTGGGCCCTTAAGTTCTCCATCAGCAACGCCAATA TCAAGATCAGCGGGAAATGGAAGGCACAAAAGAGATTCTTAAAAATGAGCGGCAATTTTGACCTGAGCATAGAAG GCATGTCCATTTCGGCTGATCTGAAGCTGGGCAGTAACCCCACGTCAGGCAAGCCCACCATCACCTGCTCCAGCT GCAGCAGCCACATCAACAGTGTCCACGTGCACATCTCAAAGAGCAAAGTGGGGTGGCTGATCCAACTCTTCCACA AAAAATTGAGTCTGCGCTTCGAAACAAGATGAACAGCCAGGTCTGCGAGAAAGTGACCAATTCTGTATCCTCCG AGCTGCAACCTTATTTCCAGACTCTGCCAGTAATGACCAAAATAGATTCTGTGGCTGGAATCAACTATGGTCTGG TGGCACCTCCAGCAACCACGGCTGAGACCCTGGATGTACAGATGAAGGGGGAGTTTTACAGTGAGAACCACCACA ATCCACCTCCCTTTGCTCCACCAGTGATGGAGTTTCCCGCTGCCCATGACCGCATGGTATACCTGGGCCTCTCAG ACTACTTCTTCAACACAGCCGGGCTTGTATACCAAGAGGCTGGGGTCTTGAAGATGACCCTTAGAGATGACATGA TTCCAAAGGAGTCCAAATTTCGACTGACAACCAAGTTCTTTGGAACCTTCCTACCTGAGGTGGCCAAGAAGTTTC TCTACCCTGCCGTGGATGTCCAGGCCTTTGCCGTCCTCCCCAACTCCTCCCTGGCTTCCCTCATTGGCA GCACACAACTGGTTCCATGGAGGTCAGCGCCGAGTCCAACAGGCTTGTTGGAGAGCTCAAGCTGGATAGGCTGCT CCTGGAACTGAAGCACTCAAATATTGGCCCCTTCCCGGTTGAATTGCTGCAGGATATCATGAACTACATTGTACC CATTCTTGTGCTGCCCAGGGTTAACGAGAAACTACAGAAAGGCTTCCCTCTCCCGACGCCGGCCAGAGTCCAGCT CTACAACGTAGTGCTTCAGCCTCACCAGAACTTCCTGCTGTTCGGTGCAGACGTTGTCTATAAATGAAGGCACCA GGGGTGCCGGGGGCTGTCAGCCACACCTGTTCCTGATGGGCTGTGGGGCACCGGCTGCCTTTCCCCAGGGAATCC TCTCCAGATCTTAACCAAGAGCCCCTTGCAAACTTCTTCGACTCAGATTCAGAAATGATCTAAACACGAGGAAAC ATTATTCATTGGAAAAGTGCATGGTGTATTTTAGGGATTATGAGCTTCTTTCAAGGGCTAAGGCTGCAGAGAT TTTTTCATGTG

GCGCTCCAAGATGGCGGCGAACGTGTTCCCGTTCCGCGACGCCGTGCCGCACCGGACCCAGTGCTGGAGGCCGG GTGTCCCGGGCAGGACCCAGGTCCCGAGCCGCGCCTGCAGTTCCGCGCGGTGTGCGCCGGGTCGTGGCGGGGC ACGGGGCGCGTCGGGCCCGCAGGTGGGGAACGCTCTGGGCAGCCTGGAGCCACTGCGCTGGATGCTGCGCTCGCC $\tt CTTCGACCGCAACGTGCCGGTCAACCTGGAGCTTCAGGAGTTGCTGGACTACAGCTTCCAGCACCTGGGTGT$ CTCCTCACAGGGCTGTGTTGATCATCCCATAGTTTTGACAGAAGCTGTGTGCAACCCACTGTATTCACGGCAAAT GATGTCTGAGCTTCTTTTTGAGTGCTACGGGATTCCCAAGGTTGCCTATGGAATAGACAGCCTCTTCAGCTTCTA CCACAATAAGCCAAAGAACTCGATGTGCAGTGGGCTAATCATTTCATCTGGATACCAGTGTACGCATGTTTTACC CATCTTAGAAGGGAGATTAGATGCTAAAAACTGCAAGCGCATCAATCTTGGAGGAAGCCAAGCAGCTGGTTACCT CCAGCGTCTCCTCCAGCTGAAGTACCCTGGGCACCTGGCAGCCATCACCCTCAGCCGCATGGAGGAGATTCTGCA TGAGCACAGCTACATCGCTGAGGATTATGTGGAAGAATTACACAAATGGCGGTGTCCTGATTATTATGAGAATAA TGTCCACAAGATGCAGCTCCCATTTTCCAGCAAGCTCCTGGGCAGCACTCTGACCTCTGAGGAGAAACAAGAAAG GCGGCAGCAGCAATTGCGGCGGCTGCAGGAGCTCAATGCCCGGCGGGGGGAGGAGAAGCTGCAGCTGGATCAGGA GCGTCTGGACCGACTGCTATATGTGCAGGAACTTCTAGAGGATGGCCAGATGGATCAGTTTCACAAAGCTCTGAT AGAGCTGAATATGGACTCCCCAGAAGAGCTGCAGTCCTACATCCAGAAGCTCAGTATAGCAGTGGAGCAGGCTAA GCAGAAAATCCTCCAAGCGGAAGTCAACCTCGAGGTGGATGTGGTAGACAGCAAGCCAGAGACCCCTGACCTGGA AGTGGAGAGCCGGTCACCACTGTTCAGCCCGTGTTTAACTTGGCAGCATATCATCAGCTATTTGTTGGGACAGA AAGAATTCGAGCTCCAGAGATTATTTTCCAGCCATCTCTCATAGGAGAACAGGCTGGGATTGCAGAGACTCT TCAGTACATTCTGGACAGGTACCCAGAGGACATTCAGGAAATGCTGGTTCAGAACGTTTTCCTCACTGGCGGCAA CACGATGTATCCTGGCATGAAAGCCAGAATGGAGAAGGAACTGTTGGAGATGAGACCCTTCCGGTCTTCTTTCA GGTTCAACTTGCCTCGAACCCTGTGCTGGATGCCTGGTACGGTGCTCGTGACTGGGCCTTGAACCACCTAGATGA TAATGAAGTTTGGATCACCAGGAAAGAGTATGAAGAAAAGGGAGGAGGAGTACCTCAAGGAGCACTGTGCTTCCAA CATCTATGTCCCCATCCGCCTGCCGAAGCAGGCCTCCCGCTCCTCAGATGCCCAGGCATCCAGCAAGGGCTCCGC $\tt TGCTGGTGGAGGTGGTGAGCAGGCA{\color{blue}{\textbf{TAG}}} CAGAGGCCCTCCAGAGAGACTGCCCTGCACGCCATGCCTTG$ GGCCACGTTGGCAGTGTGACAGGACTGTGATTGTGCTAGATGTACCTGCCCAAGTCTGCTGGTCACATTTGGCAG CAAAATGGATTTCTCCTGGGGAGAACAAAGTTAAGGGACACTGAGACCTGCCCTTCAGAATTCGGTTCACTTGGG GGCTTCTGTGGTAGAGACTAACTGGCCTTCTGATGTCTTTGTTCAACTGTGGCCAGCTGTGGCATCAGCTTCCTG GAGCAGTAAATGAAGACAGAGTGGAGGACACAAATGTACAAAATGCACAAGACTGATTTCTTACCACATTTTAGT CTTTCTTGTTTT

MAANVFPFRDARAAPDPVLEAGPVAHGPLPVPLVLDNGSFQVRAGWACPGQDPGPEPRLQFRAVCARGRGGARGA SGPQVGNALGSLEPLRWMLRSPFDRNVPVNLELQELLLDYSFQHLGVSSQGCVDHPIVLTEAVCNPLYSRQMMSE LLFECYGIPKVAYGIDSLFSFYHNKPKNSMCSGLIISSGYQCTHVLPILEGRLDAKNCKRINLGGSQAAGYLQRL LQLKYPGHLAAITLSRMEEILHEHSYIAEDYVEELHKWRCPDYYENNVHKMQLPFSSKLLGSTLTSEEKQERRQQ QLRRLQELNARRREEKLQLDQERLDRLLYVQELLEDGQMDQFHKALIELNMDSPEELQSYIQKLSIAVEQAKQKI LQAEVNLEVDVVDSKPETPDLEQLEPSLEDVESMNDFDPLFSEETPGVEKPVTTVQPVFNLAAYHQLFVGTERIR APEIIFQPSLIGEEQAGIAETLQYILDRYPEDIQEMLVQNVFLTGGNTMYPGMKARMEKELLEMRPFRSSFQVQL ASNPVLDAWYGARDWALNHLDDNEVWITRKEYEEKGGEYLKEHCASNIYVPIRLPKQASRSSDAQASSKGSAAGG GGAGEQA

6248/6881 FIGURE 5771A

 $\texttt{C} \underline{\textbf{ATG}} \texttt{GCGGGCGCCGCGTCCCCTTGCGCCAACGGCTGCGGGCCCGGCGCCCCTCGGACGCCGAGGTGCTGCACCT}$ CTGCCGCAGCCTCGAGGTGGGCACCGTCATGACTTTGTTCTACTCCAAGAAGTCGCAGCGACCCGAGCGGAAGAC CTTCCAGGTCAAGCTGGAGACGCGCCAGATCACGTGGAGCCGGGGCGCCGACAAGATCGAGGGGGCCATTGACAT TCGTGAAATTAAGGAGATCCGCCCAGGGAAGACCTCACGGGACTTTGATCGCTATCAAGAGGACCCAGCTTTCCG ${\tt GCCGGACCAGTCACATTGCTTTGTCATTCTCTATGGAATGGAATTTCGCCTGAAAACGCTGAGCCTGCAAGCCAC}$ ATCTGAGGATGAAGTGAACATGTGGATCAAGGGCTTAACTTGGCTGATGGAGGATACATTGCAGGCACCCACACC ${\tt CCTGCAGATTGAGAGGTGGCTCCGGAAGCAGTTTTACTCAGTGGATCGGAATCGTGAGGATCGTATATCAGCCAA}$ GGACCTGAAGAACATGCTGTCCCAGGTCAACTACCGGGTCCCCAACATGCGCTTCCTCCGAGAGCGGCTGACGGA CCTGGAGCAGCGCAGCGGGACATCACCTACGGGCAGTTTGCTCAGCTGTACCGCAGCCTCATGTACAGCGCCCA GAAGACGATGGACCTCCCCTTCTTGGAAGCCAGTACTCTGAGGGCTGGGGAGCGGCGGAGCTTTGCCGAGTGTC GTTCATGCTCAGCTTCCTCCGAGACCCCTTACGAGAGATCGAGGAGCCATACTTCTTCCTGGATGAGTTTGTCAC CTTCCTGTTCTCCAAAGAGAACAGTGTGTGGAACTCGCAGCTGGATGCAGTATGCCCGGACACCATGAACAACCC TCTTTCCCACTACTGGATCTCCTCCTCGCACAACACGTACCTGACCGGGGACCAGTTCTCCAGTGAGTCCTCCTT GGAAGCCTATGCTCGCTGCCTGCGGATGGGCTGTCGCTGCATTGAGTTGGACTGCTGGGACGGCCCGGATGGGAT GCCAGTTATTTACCATGGGCACACCCTTACCACCAAGATCAAGTTCTCAGATGTCCTGCACACCATCAAGGAGCA TGCCTTTGTGGCCTCAGAGTACCCAGTCATCCTGTCCATTGAGGACCACTGCAGCATTGCCCAGCAGAAAACAT GGCCCAATACTTCAAGAAGGTGCTGGGGGACACACTCCTCACCAAGCCCGTGGAGATCTCTGCCGACGGGCTCCC GCCTACATCCATGATGTACTCTGAGAACGACTCAGCAACTCTATCAAGAATGGCATCCTCTACCTGGAGGACCC TGTGAACCACGAATGGTATCCCCACTACTTTGTTCTGACCAGCAGCAAGATCTACTACTCTGAGGAGACCAGCAG TGACCAGGGCAACGAGGATGAGGAGGCCCAAGGAGGTCAGCAGCAGCACAGAGCTGCACTCCAATGAGAAGTG GTTCCATGGGAAGCTAGGGGCAGGGCGTGACGGCGTCACATCGCTGAGCGCCTGCTTACTGAGTACTGCATCGA GACCGGAGCCCCTGACGGCTCCTTCCTCGTGCGAGAGAGTGAGACCTTCGTGGGCGACTACACGCTCTCTTTCTG GCGGAACGGGAAAGTCCAGCACTGCCGTATCCACTCCCGGCAAGATGCTGGGACCCCCAAGTTCTTCTTGACAGA CAACCTCGTCTTTGACTCCCTCTATGACCTCATCACGCACTACCAGCAGGTGCCCCTGCGCTGTAATGAGTTTGA GATGCGACTTTCAGAGCCTGTCCCACAGACCAACGCCCACGAGAGCAAAGAGTGGTACCACGCGAGCCTGACCAG AGCACAGGCTGAGCACATGCTAATGCGCGTCCCTCGTGATGGGGCCTTCCTGGTGCGGAAGCGGAATGAACCCAA CTCATATGCCATCTCTTTCCGGGCTGAGGGCAAGATCAAGCATTGCCGTGTCCAGCAAGAGGGCCAGACAGTGAT GCTAGGGAACTCGGAGTTCGACAGCCTTGTTGACCTCATCAGCTACTATGAGAAACACCCGCTATACCGCAAGAT GAAGCTGCGCTATCCCATCAACGAGGAGGCACTGGAGAAGATTGGCACAGCTGAGCCTGACTACGGGGCCCTGTA TGAGGGACGCAACCCTGGCTTCTATGTAGAGGCAAACCCTATGCCAACTTTCAAGTGTGCAGTCAAAGCCCTCTT TGACTACAAGGCCCAGAGGGAGGACGAGCTGACCTTCATCAAGAGCGCCATCATCCAGAATGTGGAGAAGCAAGA GGGAGGCTGGTGGCGAGGGACTACGGAGGGAAGAAGCAGCTGTGGTTCCCATCAAACTACGTGGAAGAGATGGT CAACCCCGTGGCCCTGGAGCCGGAGAGGGAGCACTTGGACGAGAACAGCCCCCTAGGGGACTTGCTGCGGGGGGT CTTGGATGTGCCGGCTTGTCAGATTGCCATCCGTCCTGAGGGCAAGAACAACCGGCTCTTCGTCTTCTCCATCAG CATGGCGTCGGTGGCCCACTGGTCCCTGGATGTTGCTGCCGACTCACAGGAGGAGCTGCAGGACTGGGTGAAAAA GATCCGTGAAGTGGCCCAGACAGCAGACGCCAGGCTCACTGAAGGGAAGATAATGGAACGGAGGAAGAAGATTGC CCTGGAGCTCTCTGAACTTGTCGTCTACTGCCGGCCTGTTCCCTTTGATGAAGAGAAGATTGGCACAGAACGTGC TTGCTACCGGGACATGTCATCCTTCCCGGAAACCAAGGCTGAGAAATACGTGAACAAGGCCAAAGGCAAGAAGTT CCTTCAGTACAATCGACTGCAGCTCTCCCGCATCTACCCCAAGGGCCAGCGACTGGATTCCTCCAACTACGATCC TTTGCCCATGTGGATCTGTGGCAGTCAGCTTGTGGCCCTCAACTTCCAGACCCCTGACAAGCCTATGCAGATGAA CCAGGCCCTCTTCATGACGGGCAGGCACTGTGGCTACGTGCTGCAGCCAAGCACCATGCGGGATGAGGCCTTCGA CCCCTTTGACAAGAGCAGCCTCCGCGGGCTGGAGCCATGTGCCATCTCTATTGAGGTGCTGGGGGCCCGACATCT GCCAAAGAATGGCCGAGGCATTGTGTGTCCTTTTGTGGAGATTGAGGTGGCTGGAGCTGAGTATGACAGCACCAA TAACCCTGAATTTGCCTTTCTGCGCTTCGTGGTGTATGAGGAAGACATGTTTAGTGACCAGAATTTCCTGGCTCA

6249/6881 FIGURE 5771B

MAGAASPCANGCGPGAPSDAEVLHLCRSLEVGTVMTLFYSKKSQRPERKTFQVKLETRQITWSRGADKIEGAIDI $\verb"REIKEIRPGKTSRDFDRYQEDPAFRPDQSHCFVILYGMEFRLKTLSLQATSEDEVNMWIKGLTWLMEDTLQAPTP"$ LQIERWLRKQFYSVDRNREDRISAKDLKNMLSQVNYRVPNMRFLRERLTDLEQRSGDITYGQFAQLYRSLMYSAQ KTMDLPFLEASTLRAGERPELCRVSLPEFQQFLLDYQGELWAVDRLQVQEFMLSFLRDPLREIEEPYFFLDEFVT FLFSKENSVWNSQLDAVCPDTMNNPLSHYWISSSHNTYLTGDQFSSESSLEAYARCLRMGCRCIELDCWDGPDGM PVIYHGHTLTTKIKFSDVLHTIKEHAFVASEYPVILSIEDHCSIAQQRNMAQYFKKVLGDTLLTKPVEISADGLP SPNQLKRKILIKHKKLAEGSAYEEVPTSMMYSENDISNSIKNGILYLEDPVNHEWYPHYFVLTSSKIYYSEETSS DQGNEDEEEPKEVSSSTELHSNEKWFHGKLGAGRDGRHIAERLLTEYCIETGAPDGSFLVRESETFVGDYTLSFW RNGKVQHCRIHSRQDAGTPKFFLTDNLVFDSLYDLITHYQQVPLRCNEFEMRLSEPVPQTNAHESKEWYHASLTR AQAEHMLMRVPRDGAFLVRKRNEPNSYAISFRAEGKIKHCRVQQEGQTVMLGNSEFDSLVDLISYYEKHPLYRKM KLRYPINEEALEKIGTAEPDYGALYEGRNPGFYVEANPMPTFKCAVKALFDYKAQREDELTFIKSAIIQNVEKQE GGWWRGDYGGKKQLWFPSNYVEEMVNPVALEPEREHLDENSPLGDLLRGVLDVPACQIAIRPEGKNNRLFVFSIS MASVAHWSLDVAADSQEELQDWVKKIREVAQTADARLTEGKIMERRKKIALELSELVVYCRPVPFDEEKIGTERA CYRDMSSFPETKAEKYVNKAKGKKFLQYNRLQLSRIYPKGQRLDSSNYDPLPMWICGSQLVALNFQTPDKPMQMN QALFMTGRHCGYVLQPSTMRDEAFDPFDKSSLRGLEPCAISIEVLGARHLPKNGRGIVCPFVEIEVAGAEYDSTK OKTEFVVDNGLNPVWPAKPFHFQISNPEFAFLRFVVYEEDMFSDQNFLAQATFPVKGLKTGYRAVPLKNNYSEDL ELASLLIKIDIFPAKENGDLSPFSGTSLRERGSDASGQLFHGRAREGSFESRYQQPFEDFRISQEHLADHFDSRE RRAPRRTRVNGDNRL

PCT/US2003/028547

6252/6881 FIGURE 5774

GCTGACGCCTTCGAGCGCGGCCCGGGGCCCGGAGCGCCCGGAGCAGCCCGGGTCCTGACCCCGGCCCGGCTCCCG GGATCTGGATGAGCTGCACTACCAGGACACAGATTCAGATGTGCCGGAGCAGAGGGATAGCAAGTGCAAGGTCAA ATGGACCCATGAGGACGACCAGCTGAGGGCCCTGGTGAGGCAGTTTGGACAGCAGGACTGGAAGTTCCTGGC CAGCCACTTCCCTAACCGCACTGACCAGCAATGCCAGTACAGGTGGCTGAGAGTTTTGAATCCAGACCTTGTCAA GGGGCCATGGACCAAAAGGAAGACCAAAAAGTCATCGAGCTGGTTAAGAAGTATGGCACAAAGCAGTGGACACT GATTGCCAAGCACCTGAAGGGCCGGCTGGGGAAGCAGTGCCGTGAACGCTGGCAACCACCTCAACCCTGAGGT GAAGAAGTCTTGCTGGACCGAGGAGGACCGCATCATCTGCGAGGCCCACAAGGTGCTGGGCAACCGCTGGGC CGAGATCGCCAAGATGTTGCCAGGGAGGACAGACAATGCTGTGAAGAATCACTGGAACTCTACCATCAAAAGGAA GGTGGACACAGGAGGCTTCTTGAGCGAGTCCAAAGACTGCAAGCCCCCAGTGTACTTGCTGCTGGAGCTCGAGGA CAAGGACGGCCTCCAGAGTGCCCAGGCACGGAAGGCCAGGGAAGTCTTCTGACCAACTGGCCCTCCGTCCCTCC TACCATAAAGGAGGAGAAAACAGTGAGGAGGAACTTGCAGCAGCCACCACATCGAAGGAACAGGAGCCCATCGG TACAGATCTGGACGCAGTGCGAACACCAGAGCCCTTGGAGGAATTCCCGAAGCGTGAGGACCAGGAAGGCTCCCC CTCTGAAGCCCTGGACTTGATCGAGTCGGACCCTGATGCTTGGTGTGACCTGAGTAAATTTGACCTCCCTGAGGA ACCATCTGCAGAGGACAGTATCAACAACAGCCTAGTGCAGCTGCAAGCGTCACATCAGCAGCAAGTCCTGCCACC GAGCAGCCGGGGCGAGCTGATCCCCATCTCCCCCAGCACTGAAGTCGGGGGCTCTGGCATTGGCACACCGCCCTC GGATTCCTGTAACAGCCTCACGCCCAAGAGCACACCTGTTAAGACCCTGCCCTTCTCGCCCTCCCAGTTTCTGAA $\verb|CTTCTGGAACAAACAGGACACATTGGAGCTGGAGAGCCCCTCGCTGACATCCACCCCAGTGTGCAGCCAGAAGGT|\\$ GGTGGTCACCACACCACTGCACCGGGACAAGACACCCCTGCACCAGAAACATGCTGCGTTTGTAACCCCAGATCA GAAGTACTCCATGGACAACACTCCCCACACGCCAACCCCGTTCAAGAACGCCCTGGAGAAGTACGGACCCCTGAA GCCCTGCCACAGACCCCGCACCTGGAGGAGGACTTGAAGGAGGTGCTGCGTTCTGAGGCTGGCATCGAACTCAT ${\tt CATCGAGGACGACATCAGGCCCGAGAAGCAGAAGAGGAAGCCTGGGCTGCGGCGGAGCCCCATCAAGAAAGTCCG}$ GAAGTCTCTGGCTCTTGACATTGTGGATGAGGATGTGAAGCTGATGTCCACACTGCCCAAGTCTCTATCCTT GCCGACAACTGCCCTTCAAACTCTTCCAGCCTCACCCTGTCAGGTATCAAAGAAGACAACAGCTTGCTCAACCA GGGCTTCTTGCAGGCCAAGCCCGAGAAGGCAGCAGTGGCCCAGAAGCCCCGAAGCCACTTCACGACACCTGCCCC TATGTCCAGTGCCTGGAAGACGGTGGCCTGCGGGGGGACCAGGGACCAGCTTTTCATGCAGGAGAAAGCCCGGCA $\texttt{GCTCCTGGGCCGCCTGAAGCCCAGCCACACTCTCGGACCCTCATCTTGTCC} \underline{\textbf{TGA}} \underline{\textbf{GGTGTTGAGGGTGTCACGAG}}$ CCCATTCTCATGTTTACAGGGGTTGTGGGGGCAGAGGGGGTCTGTGAATCTGAGAGTCATTCAGGTGACCTCCTG CAGGGAGCCTTCTGCCACCAGCCCCTCCCCAGACTCTCAGGTGGAGGCAACAGGGCCATGTGCTGCCCTGTTGCC CCACAGGGAGCTCCGTCAGCTTCTCCCAAGCCCACGTCAGGCCTGGCCTCATCTCAGACCCTGCTTAGGATGGGG TG

MSRRTRCEDLDELHYQDTDSDVPEQRDSKCKVKWTHEEDEQLRALVRQFGQQDWKFLASHFPNRTDQQCQYRWLR VLNPDLVKGPWTKEEDQKVIELVKKYGTKQWTLIAKHLKGRLGKQCRERWHNHLNPEVKKSCWTEEEDRIICEAH KVLGNRWAEIAKMLPGRTDNAVKNHWNSTIKRKVDTGGFLSESKDCKPPVYLLLELEDKDGLQSAQPTEGQGSLL TNWPSVPPTIKEEENSEEELAAATTSKEQEPIGTDLDAVRTPEPLEEFPKREDQEGSPPETSLPYKWVVEAANLL IPAVGSSLSEALDLIESDPDAWCDLSKFDLPEEPSAEDSINNSLVQLQASHQQQVLPPRQPSALVPSVTEYRLDG HTISDLSRSSRGELIPISPSTEVGGSGIGTPPSVLKRQRKRRVALSPVTENSTSLSFLDSCNSLTPKSTPVKTLP FSPSQFLNFWNKQDTLELESPSLTSTPVCSQKVVVTTPLHRDKTPLHQKHAAFVTPDQKYSMDNTPHTPTFFKNA LEKYGPLKPLPQTPHLEEDLKEVLRSEAGIELIIEDDIRPEKQKRKPGLRRSPIKKVRKSLALDIVDEDVKLMMS TLPKSLSLPTTAPSNSSSLTLSGIKEDNSLLNQGFLQAKPEKAAVAQKPRSHFTTPAPMSSAWKTVACGGTRDQL FMQEKARQLLGRLKFSHTSRTLILS

CCGGGGCGCACGAGGGCACCATGGCCCAGACGCCCGCCTTCGACAAGCCCAAAGTGAAACTGCATGTCCACCTAG ACGGATCCATCAAGCCTGAAACCATCTTATACTATGGCAGGAGGAGGGATCGCCCTCCCAGCTAACACAGCAG AGGGGCTGCTGAACGTCATTGGCATGGACAAGCCGCTCACCCTTCCAGACTTCCTGGCCAAGTTTGACTACTACA TGCCTGCTATCGCGGGCTGCCGGGAGGCTATCAAAAGGATCGCCTATGAGTTTGTAGAGATGAAGGCCAAAGAGG ${\tt GCGTGGTGTATGTGGAGGTGCGGTACAGTCCGCACCTGCTGGCCAACTCCAAAGTGGAGCCAATCCCCTGGAACC}$ AGGCTGAAGGGGACCTCACCCCAGACGAGGTGGTGGCCCTAGTGGGCCAGGGCCTGCAGGAGGGGGAGCGAGACT TCGGGGTCAAGGCCCGGTCCATCCTGTGCTGCATGCGCCCACCAGCCCAACTGGTCCCCCAAGGTGGTGGAGCTGT TGCCTGGACATGTCCAGGCCTACCAGGAGGCTGTGAAGAGCGGCATTCACCGTACTGTCCACGCCGGGGAGGTGG GCTCGGCCGAAGTAGTAAAAGAGGCTGTGGACATACTCAAGACAGAGCGGCTGGGACACGGCTACCACACCCTGG AAGACCAGGCCCTTTATAACAGGCTGCGGCAGGAAAACATGCACTTCGAGATCTGCCCCTGGTCCAGCTACCTCA CTGGTGCCTGGAAGCCGGACACGGAGCATGCAGTCATTCGGCTCAAAAATGACCAGGCTAACTACTCGCTCAACA CAGATGACCCGCTCATCTTCAAGTCCACCCTGGACACTGATTACCAGATGACCAAACGGGACATGGGCTTTACTG AAGAGGAGTTTAAAAGGCTGAACATCAATGCGGCCAAATCTAGTTTCCTCCCAGAAGATGAAAAAGAGGGAGCTTC TCGACCTGCTCTATAAAGCCTATGGGATGCCACCTTCAGCCTCTGCAGGGCAGAACCTCTGAAGACGCCACTCCT CATGGCCGCGTCACTTCTCTGATTATGTGCCCTGGCCAGGGACCAGCGCCCTTGCACATGGGCATGGTTGAATCT GAAACCCTCCTTCTGTGGCAACTTGTACTGAAAATCTGGTGCTCAATAAAGAAGCCCATGGCTGGTGGCATGC

MAQTPAFDKPKVKLHVHLDGSIKPETILYYGRRRGIALPANTAEGLLNVIGMDKPLTLPDFLAKFDYYMPAIAGC REAIKRIAYEFVEMKAKEGVVYVEVRYSPHLLANSKVEPIPWNQAEGDLTPDEVVALVGQGLQEGERDFGVKARS ILCCMRHQPNWSPKVVELCKKYQQQTVVAIDLAGDETIPGSSLLPGHVQAYQEAVKSGIHRTVHAGEVGSAEVVK EAVDILKTERLGHGYHTLEDQALYNRLRQENMHFEICPWSSYLTGAWKPDTEHAVIRLKNDQANYSLNTDDPLIF KSTLDTDYQMTKRDMGFTEEEFKRLNINAAKSSFLPEDEKRELLDLLYKAYGMPPSASAGQNL

GTTCGCTGTTGGGCGGAGATATTCGCCGCCGCGCTTGCGCCCGGAAGGTGTGCCGCACCACACGGGGGAGGAAG GAAGGAGCTCCCAACTCGCCGGCCTGGCCACGGGATGGCCCCCAAATTCCCAGACTCTGTGGAGGAGCTCCGCGC GCAGGCGCAAGGTTCTTCAGACCCAGAAGAAGAAGTGTTCTCTACTCCAACCGAGCAGCATGTCACTTGAAGGA TGGAAACTGCAGAGACTGCATCAAAGATTGCACTTCAGCACTGGCCTTGGTTCCCTTCAGCATTAAGCCCCTGCT GCGCCGAGCATCTGCTTATGAGGCTCTGGAGAAGTACCCTATGGCCTATGTTGACTATAAGACTGTGCTGCAGAT TGATGATAATGTGACGTCAGCCGTAGAAGGCATCAACAGAATGACCAGAGCTCTCATGGACTCGCTTGGGCCTGA GTGGCGCCTGAAGCTGCCCTCAATCCCCTTGGTGCCTGTTTCAGCTCAGAAGAGGTGGAATTCCTTGCCTTCGGA GAACCACAAAGAGATGGCTAAAAGCAAATCCAAAGAAACCACAGCTACAAAGAACAGAGTGCCTTCTGCTGGGGA TGTGGAGAAAGCCAGAGTTCTGAAGGAAGAAGGCAATGAGCTTGTAAAGAAGGGAAACCATAAGAAAGCTATTGA GAAGTACAGTGAAAGCCTCTTGTGTAGTAACCTGGAATCTGCCACGTACAGCAACAGAGCACTCTGCTATTTGGT CTACAGACGGGCTCAAGCC&ACAAAGCACTCAAGGACTATAAATCCAGCTTTGCAGACATCAGCAACCTCCTACA GATTGAGCCTAGGAATGGTCCTGCACAGAAGTTGCGGCAGGAAGTGAAGCAGAACCTACACTAAAAACCCCAACAG GGCAACTGGAACCCTGCCTGACCTTACCCAGAGAAGCCATGGGCCACCTGCTCTGTGCCCGCTCCTGAAACCCA GCATGCCCCAAGTGAGCTCTGAAGCCCCCTCCTCAATCCCTTGATGGCCTCCCACCCTGTAAGAGGCTTTGCTTG TTCAAATTAAACTCAGTGTAGTCAAACACAGACATGGTTGTTGCACCAGAAAGGTCCCCACTAGAGCTAAGCGTG GGCTTTGTCCTGCCCAAGTGGGCTGCAGACTGAGTGCTGCCCTTGTAGCTTCCCCAGACCCCAACTCACTGCAGT TCATCTGAACAACCTGAGCTCCTGGGCCGGGTGGAAGGAGGGGGGATAAACCTAAGGCCCTGATCCAAAGCAGCC TGTTGAGCTGGTTCTCCAGGGCTGCAGTCTCTCCAGGTGTACAGCTGCTGTCCTGCCCTGTCCTGTCCTTGCAC AGTCTCCTATGTCTGAGCCCCAGTGCCTTCTGTTCGGGCCCTCCTTTGGTGGGAAGGCAGAGCCCTGACCCTTGA ATGGTTGTCCTTGACTCTGTGCTGCTTCTGCAGAGAGGCACCTAAGCTGTTTAAAGAGCCCAGTGATTGTG GCTGCTCCTAGAGGTGGGAGGGGCAAGAGGCCTCCTTGGTCAGTGTCCATGCTTTCTGGGCAGGGACTTGG TTTTTTGTTCCAACAGTGGCCTTCTCCGGGCTTCATAGTTCTTTGTAATATGTTGAAGTTAATTTGAATTGACTG ATTTTGTTGAACTGTGTGTTTAAGCTGTTGCATTAAAAAGCTTTCTTCTACATCAATATCTGCTGTGCTTTCATT TATGCCTTTTCAGCTTTGCACCTGGAACTCTGTAGTAATAATAAAAGTTATTGCTTATTGGGCATTC

CAATACAGCTAAGGAATTATCCCTTGTAAATACCACAGACCCGCCCTGGAGCCAGGCCAAGCTGGACTGCATAAA
GATTGGTATGGCCTTAGCCCAAACACCTTCCTGACACCATCAGGGCCAGCCCAGCTTCTTGATCGTGGTGG
TGTTCCTCATCGCTGGGACGCTGGTTCTAGAGGCCAGCTGTCACGGGAGTTCCTGTTAAAGGTCAAGACACTGTCA
AAGGCCGTGTTCCATTCAATGGACAAGATCCCGTTAAAGGACAAGTTTCAGTTAAAGGTCAAGATAAAGTCAAAG
CGCAAGAGCCAGTCAAAAGGTCCAGTCTCCACTAAGCCTGGCTCCTGCCCCATTATCTTGATCCGGTGCGCCATGT
TGAATCCCCCTAACCGCTGCTTGAAAGATACTGACTGCCCAGGAATCAAGAAGTGCTGTGAAGGCTCTTGCGGGA
TGGCCTGTTTCGTTCCCCAGTCAAAGGGAGCCGGTCCTTGCTGCACCTGTCCCCAGAGCTACAGGCCCCAT
CTGGTCCTAAGTCCCTGCTGCCCTTCCCCTTCCCACACTGTCCATTCTTCCTCCCATTCAGGATGCCCACGGCTG
GAGCTGCCTCTCTCATCCACTTTCCAATAAA

 ${\tt MRASSFLIVVVFLIAGTLVLEAAVTGVPVKGQDTVKGRVPFNGQDPVKGQVSVKGQDKVKAQEPVKGPVSTKPGS} \\ {\tt CPIILIRCAMLNPPNRCLKDTDCPGIKKCCEGSCGMACFVPQ}$

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 ${\tt MKSSGLFPFLVLLALGTLAPWAVEGSGKSFKAGVCPPKKSAQCLRYKKPECQSDWQCPGKKRCCPDTCGIKCLDP} \\ {\tt VDTPNPTRRKPGKCPVTYGQCLMLNPPNFCEMDGQCKRDLKCCMGMCGKSCVSPVKA}$

WO 2004/030615 PCT/US2003/028547

6261/6881 FIGURE 5783

CGACACCTGCGGGAGGAACTTGTCATCACCCCGCTGCCTTCCGGGGACGTAGCCGCCACATTCCAGTTCCGCACG CGCTGGGATTCGGAGCTTCAGCGGGAAGGAGTGTCCCATTACAGGCTCTTTCCCAAAGCCCTGGGGCAGCTGATC TCCAAGTATTCTCTACGGGAGCTGCACCTGTCATTCACACAAGGCTTTTGGAGGACCCGATACTGGGGGCCACCC TTCCTGCAGGCCCCATCAGGTGCAGAGCTGTGGGTCTGGTTCCAAGACACTGTCACTGATGTGGATAAATCTTGG CCCACTGCCTCCTTCAAACCCCTGGGTCTGGCCAATGACACTGACCACTACTTTCTGCGCTATGCTGTGCTGCCG GTGCTGCTGAAGGCAGATCGCTTGTTCCACACCAGCTACCACTCCCAGGCAGTGCATATCCGCCCTGTTTGCAGA AATGCACGCTGTACTAGCATCTCCTGGGAGCTGAGGCAGACCCTGTCAGTTGTATTTGATGCCTTCATCACGGGG CAGGGAAGAAGACTGGTCCCTCTTCCGGATGTTCTCCCGAACCCTCACGGAGCCCTGCCCCCTGGCTTCAGAG AACTCTCGAAACCTCAACATCCAGCTCAAGTGGAAGAGACCCCCAGAGAATGAGGCCCCCCAGTGCCCTTCCTG TACCGGGCCTTCCCGGTGCTGCTGCTGGACACCGTACCCTGGTATCTGCGGCTGTATGTGCACACCCTCACCATC ACCTCCAAGGGCAAGGAGAACAAACCAAGTTACATCCACTACCAGCCTGCCCAGGACCGGCTGCAACCCCACCTC TGGACCGAGTACACGCCAGATCCTAACCATGGCTTCTATGTCAGCCCATCTGTCCTCAGCGCCCTTGTGCCCAGC ATGGTAGCAGCCAAGCCAGTGGACTGGGAAGAGAGTCCCCTCTTCAACAGCCTGTTCCCAGTCTCTGATGGCTCT AACTACTTTGTGCGGCTCTACACGGAGCCGCTGCTGGTGAACCTGCCGACACCGGACTTCAGCATGCCCTACAAC GTGATCTGCCTCACGTGCACTGTGGTGGCCGTGTGCTACGGCTCCTTCTACAATCTCCTCACCCGAACCTTCCAC ATCGAGGAGCCCCGCACAGGTGGCCTGGCCAAGCGGCTGGCCAACCTTATCCGGCGCGCCCGAGGTGTCCCCCCA CTCTGATTCTTGCCCTTTCCAGCAGCTGCAGCTGCCGTTTCTCTCTGGGGAGGGGAGCCCAAGGGCTGTTTCTGC CACTTGCTCTCCTCAGAGTTGGCTTTTGAACCAAAGTGCCCTGGACCAGGTCAGGGCCTACAGCTGTGTTGTCCA GTACAGGAGCCACGAGCCAAATGTGGCATTTGAATTTGAATTAACTTAGAAATTCATTTCCTCACCTGTAGTGGC CACCTCTATATTGAGGTGCTCAATAAGCAAAAGTGGTCGGTGGCTGCTGTATTGGACAGCACAGAAAAAGATTTC CATCACCACAGAAAGGTCGGCTGGCAGCACTGGCCAAGGTGATGGGGTGTGCTACACAGTGTATGTCACTGTGTA GTGGATGGAGTTTACTGTTTGTGGAATAAAAACGGCTGTTTCCGTGCAACACAAAAA

MPSGSARPVAPGARRLVPCRTPTRHLREELVITPLPSGDVAATFQFRTRWDSELQREGVSHYRLFPKALGQLISK YSLRELHLSFTQGFWRTRYWGPPFLQAPSGAELWVWFQDTVTDVDKSWKELSNVLSGIFCASLNFIDSTNTVTPT ASFKPLGLANDTDHYFLRYAVLPREVVCTENLTPWKKLLPCSSKAGLSVLLKADRLFHTSYHSQAVHIRPVCRNA RCTSISWELRQTLSVVFDAFITGQGKKDWSLFRMFSRTLTEPCPLASESRVYVDITTYNQDNETLEVHPPPTTTY QDVILGTRKTYAIYDLLDTAMINNSRNLNIQLKWKRPPENEAPPVPFLHAQRYVSGYGLQKGELSTLLYNTHPYR AFPVLLLDTVPWYLRLYVHTLTITSKGKENKPSYIHYQPAQDRLQPHLLEMLIQLPANSVTKVSIQFERALLKWT EYTPDPNHGFYVSPSVLSALVPSMVAAKPVDWEESPLFNSLFPVSDGSNYFVRLYTEPLLVNLPTPDFSMPYNVI CLTCTVVAVCYGSFYNLLTRTFHIEEPRTGGLAKRLANLIRRARGVPPL

 ${\tt MASQNRDPAATSVAAARKGAEPSGGAARGPVGKRLQQELMTLMMSGDKGISAFPESDNLFKWVGTIHGAAGTVYEDLRYKLSLEFPSGYPYNAPTVKFLTPCYHPNVDTQGNICLDILKEKWSALYDVRTILLSIQSLLGEPNIDSPLNTHAAELWKNPTAFKKYLQETYSKQVTSQEP$

PCT/US2003/028547

6265/6881 FIGURE 5787

GTGGGACGCAGGAGGGTGCCATGGCCTCCCGGCTCCTGCACCGGCTGCGCCACGCCTTGGCCGGCGACGCCCCG GGGAGGCGGCCAGTCCAGAGGCCGAGCAGTTTCCGGAGAGCTCAGAGCTGGAGGACGACGACGCCGAGGGCC AGGAGGCTGGCCCTGACCAGCTGCCCCTCGGGGATGGGACGTCAGGAAGAAGACGCAGAACGGAGCCCCCCACCTG ATGGGCAGTGGGGCAGTCAGCTCCTGGCGCGCAGCTGCAGGATTTCTGGAAGAAGTCCCGGAACACCTTGGCAC CCCAGCGCTGCTCTTCGAAGTGACCAGCGCTAACGTTGTCAAGGACCCGCCCTCCAAGTACGTGCTCTACACCC TCGCCGTGATCGGCCCAGGACCGCCAGATTGCCAGCCCAGATCTCTCGCCGTTACTCGGACTTTGAGCGGC TGCACCGAAACCTGCAGCGGCAATTCCGGGGCCCAATGGCTGCCATCTCCTTCCCCCGTAAGCGGCTGCGCCGGA AGCTGCGCCATGCCCCGGACCTGCAGGACTTCTTCGTGCTGCCGGAGCTGCGGCGGGCACAGAGCCTCACCTGTA $\verb|CTGGCCTCTATCGTGAGGCTCTGGCACTCTGGGCCAATGCCTGGCAGCTGCAAGCCCAGCTGGGCACCCCCTCTG|\\$ GCCCAGACCGCCCCTGCTGACCCTGGCTGGCCGGCTGTGCCACCAGGAGCTGGAAGACCCTGGAGAGGCCC GGGCATGCTGTGAGAAGGCCCTGCAGCTGCTTGGGGACAAGAGCCTCCACCCTTTGCTGGCACCCTTTCTGGAGG CCCATGTCCGGCTCTCCTGGCCCTGGGCCTGGACAAACGTCAATCAGAGGCTCGGCTCCAAGCCCTGCAGGAGG $\texttt{CAGGCCTTACCCCCACACCACCCCCCAGTCTCAAAGAATTGCTCATCAAGGAGGTGCTGGAC} \textbf{\underline{TAA}} \texttt{CCCTTGCCTA}$ GATTTAAGGCCACTGTGAGGAGGGGGTTGCCCCAGAAGGCAGGGGAAGGACCTGATGAGAACAGAATAGCTGGG AGGCTGCAGAGGGTGCTGGGAGCCCCTAGAAGTTCCAAAAGAGAATGTGAAGCAGATCAAGGAAACTTCTGTTGA GCTAGGCTCAGGGTGAGCTTTGGCTGGGGTTGCCCTTGTGTAGTACAGGGAAGTCTGACACAGCCTCTCCAGCCT ATAAACAGCCGGGGGCTGTGGCACAGGTTGGGGCAATGTTCCCTTGTTGGTGGCCCCCAAGCTGGCAAGGCCT CTTGGCTGAAGGCCAGGGACTCTGCCCCTGGAGTCCTGGAGTTAAGGGATGAAGGCAAGGCTGCAGGTCTGGCCC AGGGGAATTAAAAGCCAGCCACTCC

MHRGTQEGAMASRLLHRLRHALAGDGPGEAAASPEAEQFPESSELEDDDAEGLSSRLSGTLSFTSAEDDEDDEDE DDEEAGPDQLPLGDGTSGEDAERSPPPDGQWGSQLLARQLQDFWKKSRNTLAPQRLLFEVTSANVVKDPPSKYVL YTLAVIGPGPPDCQPAQISRRYSDFERLHRNLQRQFRGPMAAISFPRKRLRRNFTAETIARRSRAFEQFLGHLQA VPELRHAPDLQDFFVLPELRRAQSLTCTGLYREALALWANAWQLQAQLGTPSGPDRPLLTLAGLAVCHQELEDPG EARACCEKALQLLGDKSLHPLLAPFLEAHVRLSWRLGLDKRQSEARLQALQEAGLTPTPPPSLKELLIKEVLD

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